BER 8, 1911.

ion of a pair of children's
rick Union. Mr. F. G. Cun-
arade, Leamington Spa:—
H. J. Dawson £2,152
A. T. Dawkes 2,150
W. Roe 2,044
R. P. Gathercole, Leamington 2,000
for acceptance.

ll Stone.
r Stone.
d Stone.
ting Stone Co., Limited
Stone Co. and C. Trask & Son, Stone Co.).
ber-Ham, Somerset.
Mr. E. A. Williams, reet, Strand.

AT!
HITE
D BRICKS
st Quality)
CT WORK?
Y?
de.
can be laid per day.
they need no whitewashing.
labour.
IN GERMANY, AMERICA, COUNTRY.
made by the
TILE CO. LTD., stone, Surrey.
ities of not less than 5,000
Works at 28/- per 1,000, net.
Samples.

el and Metallic Lava
H. Glenn), Office, 42,
nd cheapest materials
ay arches, warehouse
cow-sheds and milk-
ooms, and terraces.
the Forth Bridge Co.

, Ltd.,
RAPHERS,
Harding-street,
Fetter-lane, E.C.

ON & CO.
1838),
WHARF,
-DEPTFORD, S.E.
s 1102 (two lines).
Mark.
Asphalte.
D FELT ROOFING.
E.
TE SILICA PAVING
ect from the Mines).

ng
BAR.
ing.
Telephone:
h 2032 (4 lines).
N.W.

THE BUILDER

VOL. CI.—No. 3580. SEPTEMBER 15, 1911.

CONTENTS.

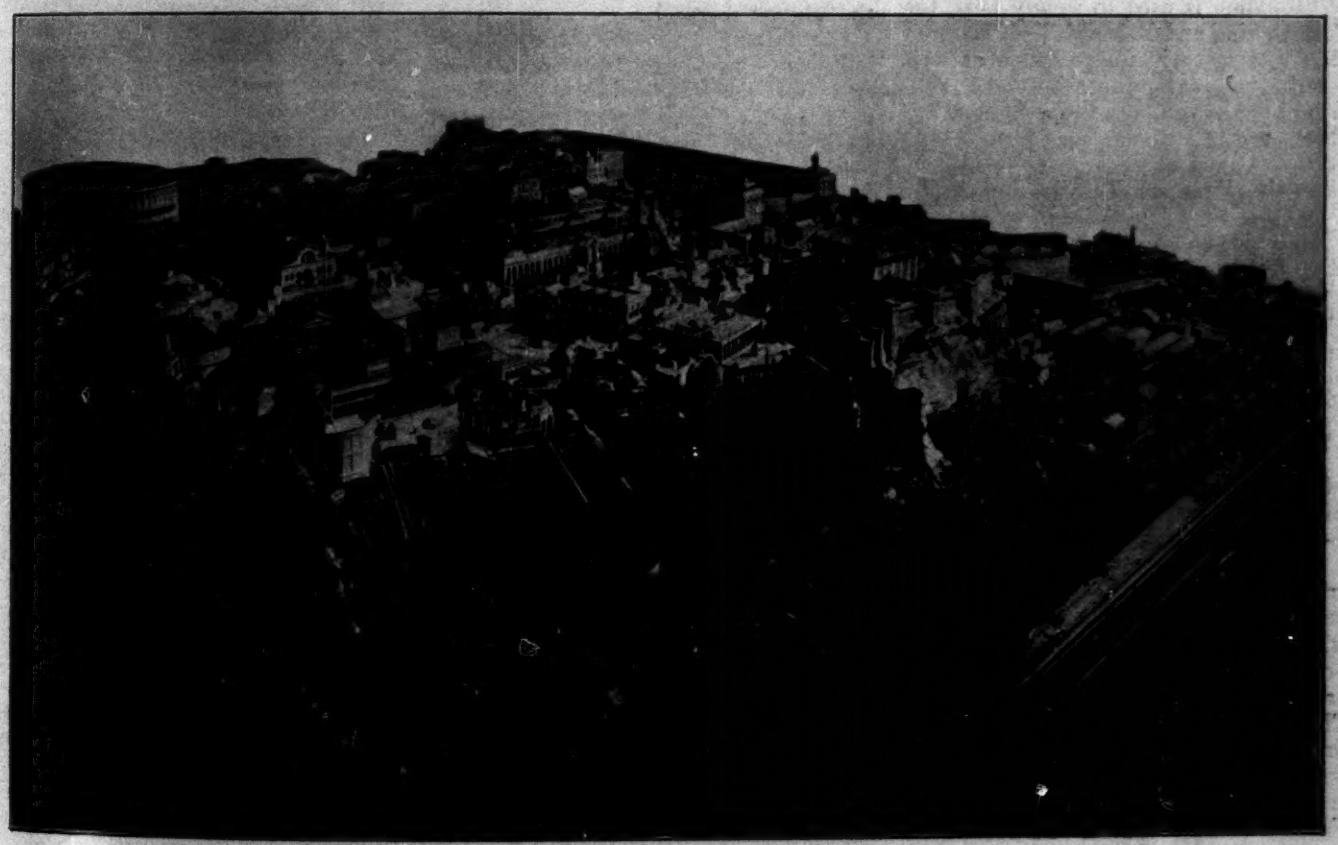
	PAGE
A Quaint Text-Book of 1734	291
The Lesson of Tattershall Castle	293
Notes	293
The Story of the Bridge. VI.—Stone Bridges and Some Problems (with Illustrations)	294
Publications Relating to the Papal Collections in Rome	297
Grand Prix de Rome (with Illustrations)	299
Memorial to Edward VII. in Crathie Church (with Illustration)	300
General News	300
Obituary	301
Editorial Summary	302
The International Congress of Architects	302
Competition News	302
Intercommunication Column	302
Notes to Illustrations	302
Fifty Years Ago	302
Monthly Historical Review:—	303
Archæological Restorations by French Architects (with Illustrations)	303
The Roman Forum	305
Notes (with Illustrations)	306
The Building Trade:—	
Recent Workmen's Compensation Cases.—II.	308
The Trade Union Congress	308
A Compact Concrete Mixing Installation (with Diagram)	309
General Building News	310
Projected New Buildings in the Provinces	310
Canadian Architecture	312
London Councils	314
Law Report	314
Patents	314
List of Competitions, Contracts, etc., Open	315
Some Recent Sales	317
Prices Current	317
Tenders	318

Illustrations.

Design Adopted by the Commissioners of Woods and Forests for the Rebuilding of Oxford-circus when the Present Crown Leases Fall in. Mr. Henry Tanner, F.R.I.B.A., Architect.

Bird's-eye View of New Gardens, Mellerstain, N.B. Professor Reginald Blomfield, A.R.A., Architect.

Model and Plan of Ancient Rome. By M. P. Bigot.



Model of Rome in the Walker Art Gallery, Liverpool.
(See "Note" on page 293.)

A QUAINT TEXT-BOOK OF 1734.

"**January 11, 173⅓.**—We have perused these Two Volumes of The Builders Dictionary and do think they contain a great deal of useful Knowledge in the Building Business.

NICHOLAS HAWKMOOR. JOHN JAMES. JAMES GIBBS."

THE chief interest of this sumptuously-bound volume lies in the recommendation. Doubtless these names had weight, as the letter is given a whole page, so that in opening the book we find a courteous hint that someone has troubled to see that ordinary readers have been safeguarded in their quest for "useful Knowledge in the Building Business."

Good bold type is accorded to the Preface to induce us not to miss it. And a wonderfully true statement is included in its propositions, viz., that "Distress was the Parent of Architecture." Many think that no alteration has occurred in this country, with certain notable exceptions, and that Distress possesses that which Emerson attributes to the English race, "great spawning power," so far as architecture is concerned. We are at liberty to differ or agree with both opinions, each to his liking.

The proposition of our text-book is that distress produced the "Indians' hut and the Icelanders' cave," and as the

authors beg us not to censure them even if they are not "Worthy of Applause," we may, perhaps with emphasis, say there is something in their proposition, however the other may stand.

"To conclude," says the Preface, "we have nothing more to add but our grateful Acknowledgements to those Gentlemen and Artists who have favoured us," etc.

To say that this discrimination is easily understood renders one liable to misconstruction, at a time, too, when we are all gentlemen and ladies. We know what the authors intended to convey, and doubtless the gentlemen and artists found their reward in a way which made up for any secret annoyance due to the distinction being drawn in such a case. We have to accept the premises that private gentlemen did not assist and that competent professional men did, and this begins a series of arguments sufficient to occupy a debating club's time during a whole evening. There is a deal of worry in thinking the matter out alone, and it is not advised.

"Building is used to signify both the Constructing and Raising of an Edifice; in which sense it comprehends as well the Expences as the Invention and Execution of the Design. In Building there are three things to be considered, viz., First, Commodity or Conveniency, Secondly, Firmness, Thirdly, Delight."

If there be a "peerage in words," as Ruskin bids us learn, here is an example. One which shows us the depth and quality of the tongue which is one of our slurred privileges.

The order may be altered to desire, our text-book says—

(1) Commodity or Conveniency.
(2) Firmness.
(3) Delight.

Altogether it seems to need nothing more than the statement as the authors left it—a standard to work up to.

What are the "Ichnography, Orthography, and Stenography of the staircase"? It is laid down that "no Person who intends to build a Structure" should proceed "without the Advice of a Surveyor or Master-Workman who understands the Theory of Building and is capable of drawing a Draught." And "In a Draught there ought to be the Ichnography of each Floor, and the Orthography of each Face"; then, "if the Artizan be well versed in Prospective more than one face may be represented Stenographically."

In any case, it is plain that Ichnography is an essential in a staircase or elsewhere; "likewise the Ichnography of all chimneys, both as to length and breadth of Hearths, Jambs, Bed-Places, Width of Doors, and Windows, in each Contignation or Floor."

So that we must observe the Ichnography of each Contignation.

There is a sympathetic, full-of-fellow-feeling sort of paragraph telling us "By no Means build too near a Great Neighbour, which were to be as unfortunately seated on the Earth as Mercury is in the Heavens, for the most part ever in Combustion or Obscurity under brighter Beams than his own."

This is described, as the authors say, as "*A Political Precept*," because they don't know what else to call it; and in italics too.

The sentiment has relationship to that of some of our present town-planning schemes, in so far as the Greater Neighbours are called upon for a better aim than that of extinguishing smaller ones if they live in the town which is planned.

We are shown an interesting account in "Mr. William Blakewey's Bill of Materials had of, and work done, by Thomas Halling, Bricklayer, June 5th, 1732:—

	£	s.	d.
For 8000 of Bricks @ 12/- per M..	4	16	0
For 4000 of Tiles @ 20/- per M ..	4	00	0
For 1500 of Lime @ 12/- per C ..	0	00	0
For 14 Load of Sand @ 2/6 per L	1	15	0
For 500 Nine inch Paving Tiles @ 11/- per C	2	15	0
For 30 Ridge Tiles @ 1½d. per piece	0	04	4½
For 3 weeks and 2 days work for myself at 3/- per diem ..	3	00	0
For 25 days work and a half for my man 2/6 per diem	3	03	9
For a labourer 25 days and a half at 1/8 per diem..	1	18	0
Their Sum Total is ..	30	12	5½"

If the error in the total is thought to be the builder's, as it is in his favour, what are we to say of the extension of the labourer's item?

Our authors say that "the bricklayers bill *may* be made after this manner," so that we must not be hypercritical. Doubtless an adjustment took place. Then we read, "But if Bricklayers do not work by the Day, then they either undertake the Work by the Great, viz., to do all, and to find all the Materials; or else they are to do it by Measure, and to do all the Work and to find all the Materials at such a price by the Rod for Walling; by the Square for Tiling; and by the Yard for Paving, etc."

In addition, we get a description of piecework, "according as he" (the bricklayer) "has made his agreement."

So that in 1734 building methods included estimated work, daywork, measured work, and piecework, as in our day.

In "Foundations" it is stated, "That we may found our Habitation firmly requires the exactest care." Surely this is well put. Turn it into the phraseology of our modern specification as a beginning for excavator and concretor, as—"All parts of the structure must be firmly founded with the most exact care," and it loses its quality without gaining any great merit as an instruction, though it retains its flavour of warning.

We get a reason for this exactest care, "For, says Sir Henry Wooton, if the Foundation dance 'twill marr all the mirth in the House."

In the instructions for foundations we meet our present rule for the bottom course of footings.

"Thirdly, that the breadth of the Substruction be at least double the Breadth of the Wall that is to be raised upon it.

But even in this case Art ought to give way to Discretion and the substruction may be made either broader or narrower, according as the Goodness of the Ground, and the Ponderosity of the Edifice requires."

In "Floorings" the "Receipts" are wide in range.

"Take of clayey loam and new soft horse dung one third, with a small quantity of coal Ashes, if they can be had, and temper these—and lay the Floor with the *Stuff* three or four inches thick."

The proportions are mystifying; and supposing "coal Ashes" can't "be had"?

"Sir Hugh Plat gives us a receipt for making an artificial Composition wherewith to make smooth *glittering* and hard Floors.

Ox Blood and fine Clay tempered together makes the finest Floor in the World."

We may question the wisdom of inserting the following, unless as a sort of backhanded caution, seeing that our authors write for those occupied in some way in building. It is frank, yet one may be excused for wincing.

"Dr. Fuller advises rather to believe any Man rather than an Artificer in his own Art as to the Charges of a *Building*, especially if either himself or any Friend of his is to be concerned in the *Building* that is designed to be erected! Not but that builders can tell nearly the Charge, when they know the Design, but it is very rare that they will give a just Estimate of it according to their judgment; because they think that if they should acquaint a Gentleman with the full Expense at first, it would discourage him from prosecuting it; and for that Reason, they sooth him up, till it cost him something considerable; after which he must go through with it, or lose what hath been expended."

Then, our authors continue, "The Spirit of Building first possessed People after the Flood; which then caused the Confusion of Languages, and, since, the Confusion of many a Man's Estate; And hence, when some Persons would with a Curse upon one with whom they are angry, they wish them to be possessed with the *Spirit of Building*, or as others term it, *The Italian Plague*."

The adjective could not be "Italian" nowadays if the plague exist still, which we at any rate are not disposed to admit.

Some of us may be inclined to agree with the criticism implied regarding the contemporary examples our authors have in mind. Was it that where severity was avoided a sort of exotic elegance was attained? That with all the dignity of the examples they were not altogether of the atmosphere if they were in it? However that may be, certainly we may agree that there is a gracious native quality added to our fair English landscapes by some of our modern masters. Their achievements fit the picture as truly an our woods and our cornfields and meadows, and actually help to make "the smiling land" of England—unmistakably of England.

PRESIDENT OF THE INSTITUTE OF MUNICIPAL ENGINEERS.

Mr. Ernest A. Stickland, A.M.Inst.C.E., Borough Surveyor, of Windsor, has been nominated by the Council of the Institution of Municipal Engineers as President for the year 1911-12. Mr. Stickland was articled in 1880 to Mr. A. M. Fowler, the City Engineer and Surveyor of Newcastle-on-Tyne. On the completion of his articles he obtained a position under the Borough Surveyor of Stockport. In 1885 he was appointed Resident Engineer for the contractor upon a large sewerage extension contract in Blackburn. On the completion of the works Mr. Stickland was appointed an assistant in the City Surveyor's office, York. Leaving there in 1887, he was appointed an assistant to the Borough Surveyor of Reading, where he remained for nearly two years. In the latter part of 1889 Mr. Stickland was appointed Borough Surveyor of Newbury, and in 1897 Borough Surveyor of Windsor.

THE LESSON OF TATTERSHALL CASTLE.

CONSIDERABLE indignation has been provoked amongst the inhabitants of the little Lincolnshire town of Tattershall by the extraordinary and incredible mutilation that the XVth-century castle, in which they take so much pride, is suffering at the hands of its most recent purchasers. The secrecy in which the whole transaction has been veiled indicates that its perpetrators, whosoever they may be, realise its discreditable nature; but the visible progress of the work is a sufficient exposure of its barbarism and folly. The first of the four wonderful stone chimney pieces to be torn out from the walls has proved by its shattered fragments (as everyone familiar with them anticipated) that their beauty and preservation depended on the support of the brickwork in which they were structurally incorporated. The whole series forms so complete an heraldic illustration of nearly four centuries of family and manorial history that their re-erection elsewhere will be an incongruous absurdity, the very falsehood of which will rob their art of all that beauty which consists in fitness. All the antiquarian societies, national and local, are keenly striving to arrest or repair such gross vandalism, but their task is a difficult one.

This is but one more example of the urgent need of Government control over our national monuments. However well informed and energetic our voluntary societies may be, it is impossible for them to take the place of, and act as efficiently as, a properly constituted authority for the purpose of protecting works of artistic or archæological value, and the other features of interest such as typical scenes of natural beauty and the haunts of wild life.

All these matters would fall within the province of a Minister of Fine Arts when we get him appointed. Our readers are doubtless aware that steps have been taken towards scheduling buildings of special value up to the end of the XVIIth century, and that considerable progress has already been made in the preparation of this list. But, important as is the work of the Royal Commission so engaged, it by no means covers the ground necessary to include all that it is desirable to preserve. For one thing, it is limited to structures from the hand of man and does not extend to objects for the beauties of which we are indebted to the workings of Nature; besides, why should the period be arbitrarily limited by the date 1700; surely there is much that we should be sorry to lose belonging to more recent periods?

As the beginning of a long and arduous undertaking, all welcomed the appointment of this Commission, but the question now is, whether we can afford to wait for the completion of its labours before taking more definite steps? We think not, and the possible fate of Tattershall Castle, even if through the efforts of Lord Brownlow and others this fate is averted, is only one more proof of the urgency of some immediate action for the preservation of our national monuments in their integrity. It may be urged that we must first decide what is a national monument or object of national interest, before we can protect it, but surely it would be possible to draft some comprehensive definition that could be operative during the completion of a detailed schedule.

We would urge our legislators to take some such step pending the years that must elapse before a full list is prepared. Other nations have long been in advance of us in this respect, and we must endeavour to make up the leeway in the most expeditious manner, even if we have to discard the claims of strictly logical procedure in so doing.

NOTES.

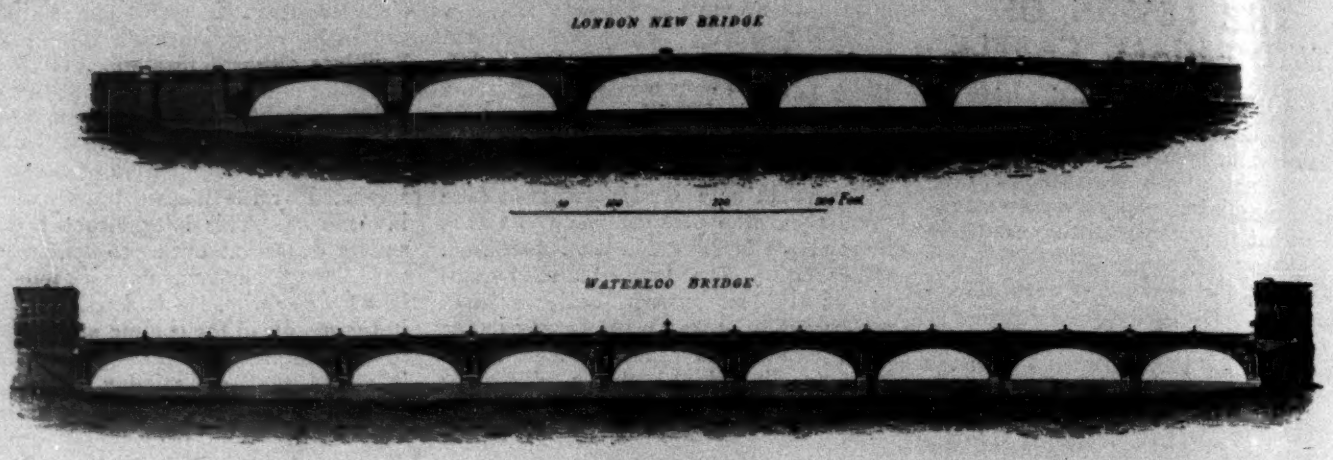
Restorations of Ancient Rome. In our Historical Review we illustrate M. Bigot's comprehensive restoration of Ancient Rome. In connexion with this, it may not be generally known that in the Walker Art Gallery at Liverpool there is a very good model of that portion of Rome surrounding the Forum as it was presumed to appear at the Imperial epoch. While this model does not quite accord with the results of more recent archæological researches, a comparison between it (see front page of this issue) and the one prepared by M. Bigot (see plate) will indicate that it gives a very fair general impression of Rome as it was, and that it is worthy of careful study by those who contemplate visiting the Eternal City, as preparatory to the fuller information to be found in the exhibition at the Piazza del Terme.

The Problem of Ventilation. That the science of ventilation has by no means reached finality, has long been obvious, and while we cannot agree with all the conclusions at which Mr. Leonard Hill, F.R.S., arrived in his paper read before the Physiological Section of the British Association, his remarks certainly point out some of the considerations that are too apt to be neglected in the study of the essentials to good ventilation. That chemical purity is not the only factor was emphasised by Mr. Hill in drawing attention to the fact that temperature, movement, and humidity also had a marked influence. A cool, moving, and dry atmosphere gives vitality and energy, a still, heated, and moist one, a sluggishness and relaxed sensation. For those concerned with the design of buildings the problem is inextricably involved with that of heating; how is sufficient warmth to be economically maintained, while at the same time air is supplied sufficiently cool to be pleasant to breathe? The questions of humidity and movement are minor ones, that of temperature has never been thoroughly solved. When it is, ventilation will have taken a great step towards reproducing the healthy and pleasant conditions that obtain in the open air on a day that is termed "bracing."

Influence of the Sun on Buildings. The expansion and contraction of building materials as the result of temperature changes is not always realised by architects quite so fully as it should be. In ordinary circumstances no particular harm is caused by expansion and contraction in buildings, although plastering and cement stucco or rendering are very apt to suffer unless suitable precautions are taken. An instructive illustration of the deformation caused by the rays of the sun is furnished by the Washington Monument in America. This lofty structure daily suffers deflection owing to temperature variations, the movements being indicated by a copper wire, 174 ft. long, suspended in the middle of the column and supporting a plummet in a vessel of water. It is stated that at midday in summer the apex of the structure, 550 ft. above ground level, is shifted some hundredths of an inch towards the north by expansion of the stone. The effect on metallic structures is naturally much greater, a fact brought home to us when walking across the Forth Bridge the day before that work was opened by King Edward VII., then Prince of Wales. On that occasion the expansion gauge on the middle girder span marked the elongation of 1 in. as the effect of the winter sun for the period of not more than one hour.

New York Building Code. Since the presentation of the conflicting reports of the 1909 Committee the existing building code of New York City has been under careful consideration by a Joint Committee, comprising representatives of the American Institute of Architects, the American Institute of Consulting Engineers, the Building Trades Employers' Association, and the New York and the National Boards of Fire Underwriters. It is satisfactory to learn that the Committee of Aldermen have shown a disposition to work with the Joint Committee and to accept their advice on technical matters. Political influences and the tactics of firms interested in different and rival structural materials and methods may probably cause some complications, but it is to be hoped that the city authorities will set their faces against all considerations save those based on technical grounds, and that the new building code may be one worthy of the great city for whose benefit it is intended. We can quite understand the attempted interference of rival commercial interests, but the introduction of politics into the settlement of technical building regulations is beyond comprehension on this side of the Atlantic.

Stonehenge and Cyrene. The mystery which veils and the wonder that still englamours the place and structure of Stonehenge are at once partially dispersed, and just by so much enhanced, by a recent discovery. Professor Richard Norton, of Harvard, investigating ancient Cyrene, the site of the capital of Cyrenaica, a little-known country to the west of Northern Egypt, has discovered an assemblage of monoliths so similar in workmanship and structure to those of the outer circle at Stonehenge that he feels justified in identifying the civilisation which made both. From this and other discoveries at Cyrene the Professor has formulated a theory that Stonehenge is perhaps the finest known witness to the existence of one great race, or, at least, one common religion, extending over all of what was



(From Professor Jenkins's "Bridges.")

in Roman times called the civilised world—a race and religion to which his findings in Cyrenaica also belong. We know little of Cyrene and the surrounding country. It lies to the west of Egypt, and is bounded by the deserts and the Mediterranean Sea. It was colonised by the Greeks at about 650 B.C., which does not imply—rather to the contrary, in fact, since the Hellenes were conquerors for choice and pioneers seldom, if ever—that the country was uninhabited till then. Professor Norton's discoveries indicate that it was peopled by a neolithic race of considerable culture, as the stone images and carving, evidently of the date of the monoliths, betray exceptional skill. The association of Stonehenge with Greece rests, too, on the strong probability that they are contemporary—belonging, that is, to the late Neolithic period. Sir Norman Lockyer's remarkable investigations in 1901, by which he discovered that the true axis of Stonehenge was planned to pierce the sun as it rose, two diameters from its present point, on the longest day 3,581 years ago, make the date of Stonehenge 1680 B.C. And, although as yet exact astronomical observations have not been brought to bear upon the temple at Greece, all indications go to prove that they were of the same age and built for the same purpose—the worship of the sun. The gradual unearthing, through the combined efforts of all the learned sciences bearing upon the remote past, of a synthetic worship amid surroundings of inalienable solemnity, of the one cause and condition of all life, origin of all the forms of Zeus, as it becomes increasingly more clear, has but the effect of adding to rather than of detracting from the marvel and fundamental sanctity of the temple on Salisbury Plain.

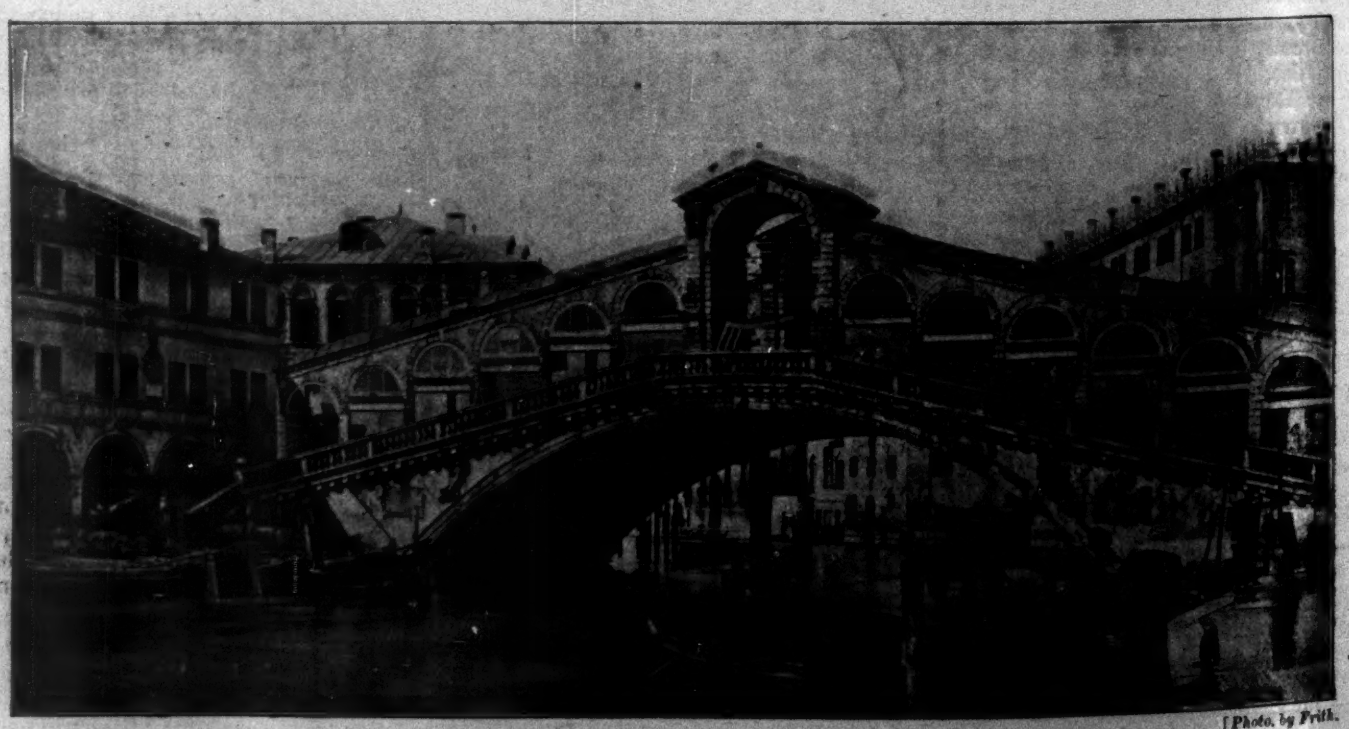
THE STORY OF THE BRIDGE.

By Walter Shaw Sparrow.

VI.—STONE BRIDGES AND SOME PROBLEMS.

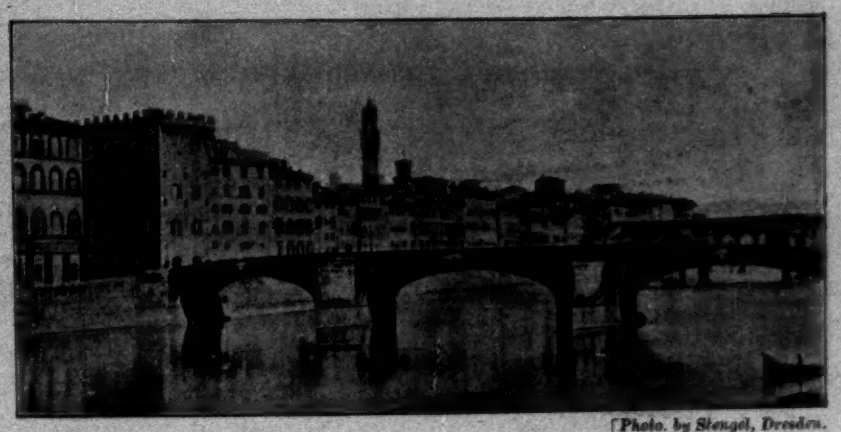
In reading the history of this subject one is troubled by half-a-dozen questions that flash into the mind repeatedly, and find there no answers based on authorities. To what extent were the ancients guided by mathematical theories and calculations in their practical dealings with the high mechanics of arched bridges? Did they start out from the point of view, afterwards held and explained by Bacon, that experience was the only safe guide to success in practical work? Were some of them at all like the great mathematicians of the XVIIth and XVIIIth centuries, who often passed by experience and observation, founding their analytical research on hypotheses which were contradicted by events and by experiments in craftsmanship? Was there among the Romans such a man as Leibnitz, who, in 1691, solved the problem of the catenary curve, showing that this was precisely the curve which an arch ought to have if its materials, infinitely small and of equal weight, were to rest securely together and in equilibrium? And was there a Roman Bernoulli, or a Roman La Hire?

Unfortunately we cannot get at all near to the scientific art of bridge building, as this thing appealed to the Romans in hours of speculative talk. Vitruvius does not help us here. But if we can take for our criterion of what was probable and likely from the general character of the Roman genius in action, then practice in bridge building was the only recognised guide, just as success or failure in war was the only recognised test of a general and his troops. Practice bred traditions, traditions formed a discipline of craft laws, and these things, passed on from generation to generation, were familiar to all good masons, so that architects and engineers had at their beck and call a body of workmen thoroughly conversant with those stern facts of practical mechanics that the winnowing experience of centuries had kept and treasured for the common use. Roman bridges and aqueducts, still extant, though sometimes in ruins only, belong to periods often wide apart in date, and from their family likeness we can infer with safety that in this perilous work, subject always to the waywardness of storms or the devastating power of floods, and the vibration of heavy traffic, sound conservative methods were the rule, little store being set on experiments in cheaper ways of attaining the same measure of convenience. It is



[Photo. by Frith.

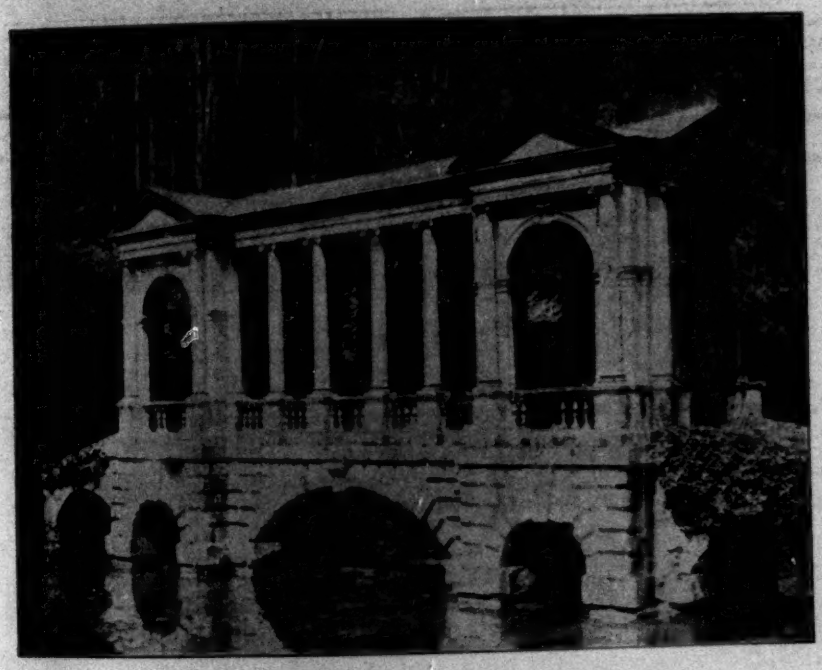
Ponte Rialto, Venice, built between 1588-1591. By Antonio da Ponte.



[Photo. by Stengel, Dresden.

Ponte S. Trinita, Florence. By Bartolomeo Ammanati (1511-1592).

remarkable, for example, that, although the Romans took infinite care in the making of their cements, they mistrusted mortars of any kind in bridge arches, preferring to give a huge aqueduct such dimensions and such proportions of its parts as would enable it to stand firmly without any cement at all between the joints of its masonry. Experience had taught them, we may believe, that slow-drying mortars were very compressible, and that quick-setting cements could not be used without risk in hewn masonry, because of the time which must elapse between their use and the bedding of heavy stones in their places upon it. They must have known, too, that when mortar was used in a bridge there should be no more of it in any joint than just enough to hinder the contact of stones, and to exclude the air without harm to an even bearing. To do the work without mortar was a compulsive discipline that made thorough craftsmanship a habit, and how perfect this construction with dry stones could be in Roman hands is very well shown in a story that concerns the giant aqueduct of Segovia. Several arches of this great monument were

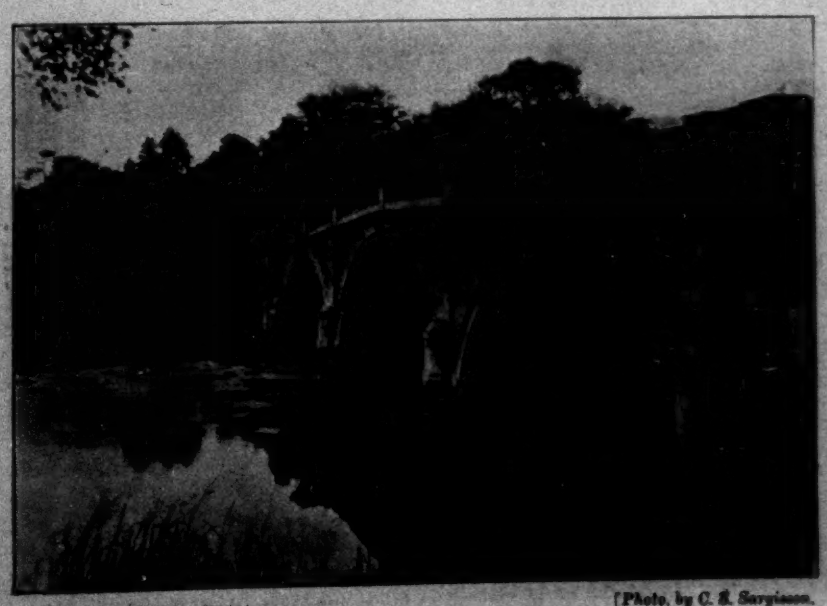


"Palladian" Bridge, Prior Park. Built by Ralph Allen (circa 1750).

broken down during the wars of the XVth century, and Isabella the Catholic had them reconstructed in the best manner of her time. Less than three centuries later the reconstruction gave way, necessitating further restoration, while the untouched Roman work remained a prodigy of youth in heroic old age. Marshal Ney visited the aqueduct in 1808, and when he saw the startling contrast between the old work and the new he pointed to the modern part and said, "The labour of men begins there!" For the Roman arcades seemed like the work of gods.

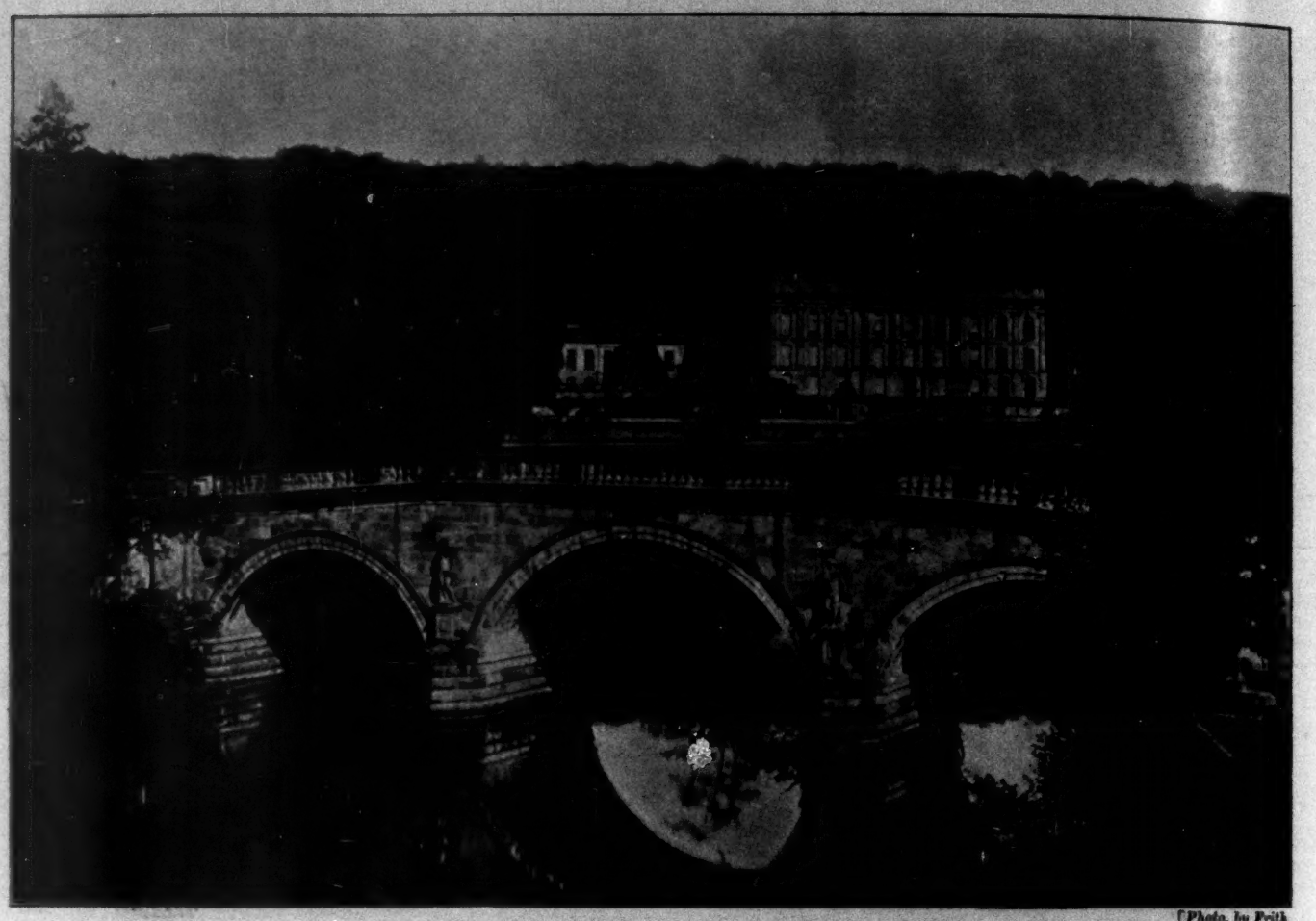
The most pitiful things in human "progress" are the dry rot of theories and the cancer of cheapness that eat their way into the vitals of craftsmanship. In the XVIIIth century a disease of theoretical speculation got a firm grip on the technics of bridge building; no work of importance was done without interference from library mathematicians, as well as from infinite talk and hesitation. Greater ado could not have been made if a successful bridge had never been built in the history of the world. And what good came from all the fustian of jostled theories? Perronet was regarded as the most scientific bridge-builder of his time; his knowledge was said to be prodigious and his gift of writing enabled him to be persuasive as well as scientific and learned. Yet his work was accompanied by blunders which in the Middle Ages would have shamed a quiet practitioner like Isembert, whose art was a rational application to special needs of thoroughly tested old methods and traditions. Perronet's self-confidence was so great that his operation of striking the centres of the bridge at Neuilly, by removing the immediate support of the arches, was begun eighteen days after the keystones had been put in their places, when the mortar had not yet become hard enough to bear new pressure without yielding. The crowns of the arches sank 23 in., showing that his mathematical resolutions without excellent mason's work were dangerous and humiliating. Smeaton, in a more tragic way, had to learn the same lesson from his disastrous bridge over the Tyne at Hexham, and learned engineering did not save the Tay Bridge from catastrophe. One could name many other examples of bad work, all arising from self-conscious and theoretical habits of mind passed on to the XIXth century by the spirit of late Renaissance art. Is there not more in rule of thumb than in rule of theory?

To study the worth of local traditions we have only to take a tour through Wales, where, as late as the second decade of the last century, the master mason of every district was able to build a good sound bridge, obeying traditions probably as old as the mediæval bridges at Llangollen, Brecon, and Holt, near Wrexham. And much of the work done is useful to ourselves for the lessons that it teaches. Welsh masons were never ashamed of scabbled faces to their stone bridges, nor of rough natural textures; their economy went hand in hand with good taste; while we for a long time have spent many thousands of pounds on daintily-finished craftsmanship that looks tame in a pile of ordered masonry. I have never seen a genuine Welsh bridge that did not add romance to a fine landscape setting, and I wonder always why Englishmen have failed to keep their old fondness for a bold handling of stone in bridges. Remember the feeble affectations that try to look architectural in the coupled columns to Waterloo Bridge. Rennie, like Telford wished to be architectural, and he was encouraged by the example set by Perronet. But Rennie and Telford were engineers, and never once did they achieve success in their efforts to be architects also. It was not in



[Photo. by C. S. Sargisson.

Bridge, Renaissance Type in Clumber Park—the Dukeries.



[Photo, by Frith.

Chatsworth Bridge and House, Derbyshire. Renaissance.

their nature to do what Ammanati had done in the finest bridge of the Renaissance, the Ponte della Santissima Trinità over the Arno at Florence, where the graceful and rhythmic arches have curves which are cycloids. Their rise from the springing level to that of the crown is only a trifle more than one-sixth the span, while the roadway above, though starting from approaches which are but moderately raised, has a mild gradient admirably suited to the needs of town traffic. The piers are in excellent proportion, and their stern cut-waters are useful foils in an architectural design unrivalled among bridges for its blending of lightness with alertness and supple vigour. Yet one Victorian expert, William Hosking, in 1842, tried to prove that the piers were too massive, but he was laughed at by architects, who said that Ammanati alone could have improved the noble design.

[Photo, by Frith.

Paris Bridges from St. Gervais.

The fact is that from the XVIIIth century onward engineers were for ever busy with projects for reducing the size of bridge piers, and in this they were partly right and partly wrong. They were partly right because the mediæval system of using piers as abutments had many disadvantages, though necessary in those days either for military reasons or because a bridge had to be a sort of perforated dyke to deepen the river up-stream. Old London Bridge was such a dyke, and all mediæval bridges of any note could be cut for defensive purposes in any part of their course without much risk to adjacent arches. On the other hand, monster piers not only interfered with navigation; they formed many a dangerous rapid below bridge, they turned flooding water into inundations, and made the drainage of mediæval towns unhealthy. All these points were noted in the

Bridge.	Breadth of Piers.	Span of Arches.	Period or Engineer.	Remarks.
	Ft.	Ft.		
Rimini	5	33	Roman	Unusual proportions in Roman work.
Vicenza	11	25	Roman	Each pier an abutment.
Alcantara	38	110	Roman	
St. Esprit	22	115	Mediæval	War bridges, with piers acting as abutments.
Old London	15 to 34	10 to 33	Mediæval	
Lyons	44	96	Mediæval	
Port Royal	14	72	Mansard	Modern peace bridges, showing their variations from the XVIIth century to the death of Telford in 1834.
Orleans	19	106	Hupeau	
Neuilly	14	128	Perronet	
Lhuewet	10	58	Inigo Jones	
Westminster, London	17	76	Labelye	
Blackfriars, London	20	100	Mylne	
Perth	18	77	Smeaton	
Dunkeld	14	90	Telford	
Kelso	12	74	Rennie	
Conon	8	65	Telford	
Bewdley	8	60	Telford	

XVIIIth century, and much thinner piers were advocated as if they had no disadvantages of their own. The thrust was to be carried over the arches to the abutments. There were to be no abutment piers at all, though wars and rumours of wars kept Europe in a ferment. Perronet alone protested. He told his employers, the French Government, that it would be prudent, in designing bridges for rivers of great width, to introduce some strong piers, which, in case of need, might serve as abutments; they could be placed at distances of three or four arches apart.

No recommendation could have been wiser than that; and if we view it as a criticism on modern bridges, what are we to say? We are living at a time when all the great nations of the world are making themselves ready for the next huge war. Yet the bridges of the world are, as a rule, so unmilitary that they seem fitted only for everlasting peace and trade. A single shell would ruin a great suspension bridge; a whole railway system could be paralysed with a few cartridges loaded with modern explosives; and how many stone bridges would bear the loss of an arch apiece without injury to the whole structures? Good heavens! If the black race in the U.S.A. were to produce a great leader, a Napoleon, how easily he could prove that a destruction of unwarlike bridges cripples an industrial type of society! In short, whatever may be said against the mediæval bridge, it certainly typified the mediæval spirit, in religion and in war; while the bridges of our own time have nothing whatever in common with that prime force in politics that needs for its assertion the discipline of vast armies and of great navies.

But I shall be told, perhaps, that no skill and thought could succeed in making our bridges proof against artillery. This is true; but it is true also of battleships. Yet battleships are made, and rightly made, with defensive armour so as to resist shells with all the might that science can invent and improve. Why bridges should be designed without any fitness for the perils of war, as if railways and highways counted for nothing in the transport of food and men and merchandise, is a thing that passes all understanding.

I hold, then, that modern types of bridge building are all imperfect, and that the next European war will prove this to be so. While engineers have been constructing their hideous metal monsters, and scheming to get in masonry the maximum of strength with the smallest amount of materials, a necessity for defensive preparations has pressed with ever greater urgency on all alert nations, and the result is that ways of communication everywhere are out of keeping with the needs and with the destructive power of modern war. In recognition of this plain fact, what importance need we attach to such details of construction as the relative proportion between the breadth of piers and the spans of arches? Here is a little table to show how the engineering mind has viewed that one point from Roman times to the reign of Victoria:—

It will be seen that the proportion has been varied from nearly one-half of the span to a ninth part of the chord. What a war bridge should be at the present time is a hard nut for architects and engineers to crack; but an arched bridge, carried by a new and much lighter type of abutment piers, seems to be least at variance with the common sense of military defence.

The subjects chosen for illustration include the beautiful bridge by Ammanati, architect and sculptor, who died in 1592; the Rialto, finished by Antonio da Ponte in 1591; some English Renaissance types, and a striking general view of seven Paris bridges. I do not know whether the piers of a bridge are proper pedestals for figures in sculpture, but the Chatsworth bridge is one example among many of this decorative convention. A flood would wash the statues thoroughly and keep them clean, but this seems hardly enough to account for their position above the cut-waters. The Rialto, founded on 12,000 piles 10 ft. long, is carried above the Grand Canal to a height of 24 ft. 6 in. Its fine arch has a span of 91 ft., and the footway is 72 ft. wide. The design has often been given to Michelangelo, but it belongs unquestionably to Antonio da Ponte, who was chosen by the Senate in a competition against Palladio.

UNIVERSITY OF LONDON.

On October 2 will be opened a course of instruction in sculpture, under the direction of Mr. Havard Thomas, and in connexion with the Slade School of Fine Art.

STAR AND GARTER HOTEL, RICHMOND.

We understand that Mr. W. R. Waters, C.E., F.S.I., and Mr. Harold A. Coombes, successors to Mr. Albert Chancellor (Messrs. Chancellor & Sons), of Richmond and London, are instructed to carry out extensive alterations and additions, at a cost of 30,000*l.*, to the hotel, which has just been purchased after having been closed for some years. The hotel represents an inn established on the site, and with that sign, in or about 1738. A fire consumed the older part of the hotel forty years ago. Of the present buildings the banqueting-house was erected in 1864-5 after plans and designs by E. M. Barry, R.A., the pavilion or ballroom, with the gallery, was added by C. J. Phipps.

PUBLICATIONS RELATING TO THE PAPAL COLLECTIONS IN ROME.

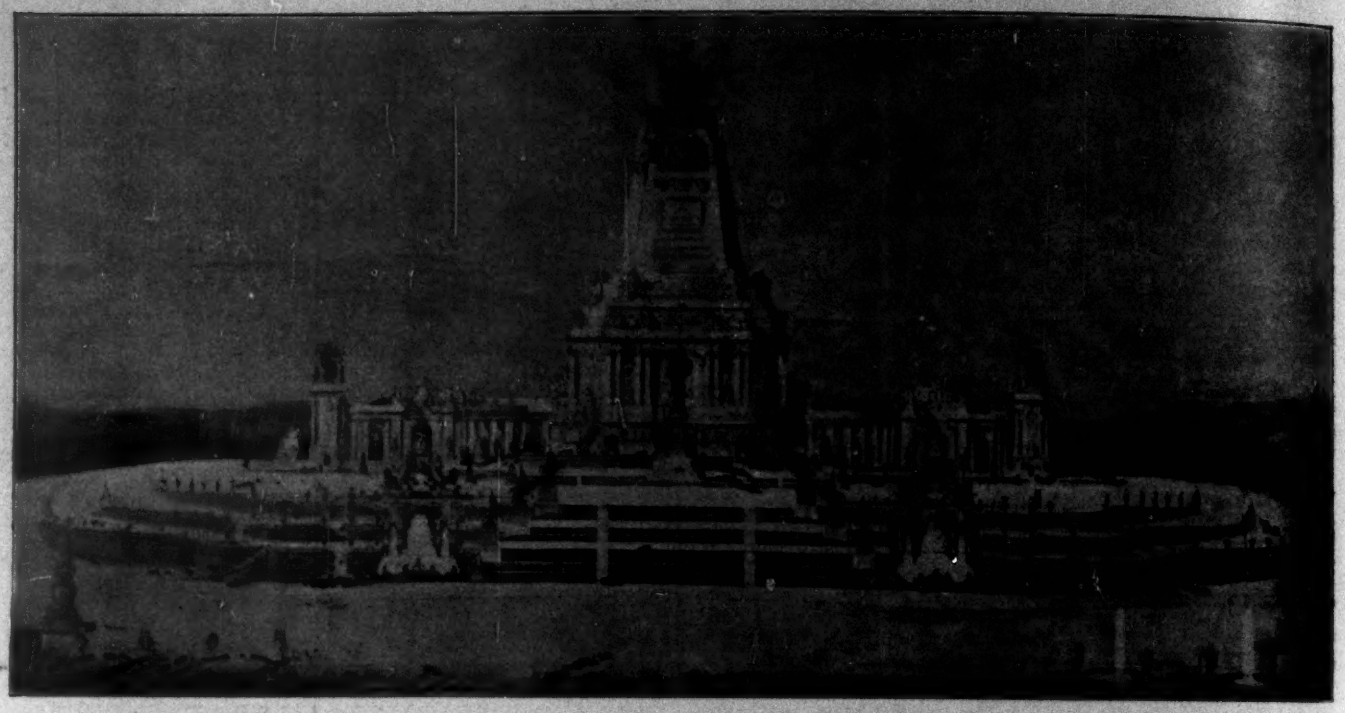
It may not be generally known to English readers that the Papal authorities have of recent years initiated the publication of two important series of works, on a really magnificent scale, dealing with the more important of the treasures in their keeping. The first of these series describes some of the more interesting objects in the archæological, artistic, and numismatic collections of the Vatican and Lateran palaces, while the second series consists of reproductions in facsimile of the most valuable of the manuscripts preserved in the Vatican Library. A new work was published in each of these series in 1910, and it so happens that both of them possess a considerable interest for architects. The first of them* contains reproductions of all the ancient mosaics in the Vatican and the Lateran palaces. Most of them are now fulfilling their original purpose, being in actual use as pavements, and only a few of the finer ones are placed upon the walls. The majority of them are not, it is true, of the highest artistic value, but they have hitherto been, it is not too much to say, hardly noticed; and this series of fine photographic reproductions—coloured plates are not given, in order not to increase still further the price of a work already somewhat costly—will enable their designs to be carefully studied and adopted by students of decoration. It will be especially instructive to compare them with the many examples of mosaic pavements which have been found in Roman buildings in Britain, which, while far rougher and coarser in execution, are often quite as complicated in design—a fact which may lead us to suppose that the original cartoons were executed in Italy or by Italian craftsmen. We do not, indeed, often get in England the simple scenes which form a not inconsiderable proportion of the mosaics illustrated in the work before us, but find rather a tendency to the use of intricate geometrical patterns, which may be due to the fact that the great majority of the Romano-British mosaics are comparatively late in date, belonging probably to the IIIrd and IVth centuries after Christ, while those preserved in the Vatican may be placed in the IInd and the IIIrd centuries.

In the work before us the mosaics are arranged in topographical order, according to the localities in which they were found—first, those from Rome and its immediate suburbs, then those from the country surrounding it (there are hardly any specimens from other parts of Italy); and, finally, those of which the provenance is unknown. First comes the well-known mosaic of athletes now in the Lateran Museum, which is really composed of the fragments of two pavements, found in the two large apses, or exedræ, at each end of the great central hall of the Baths of Caracalla, which look on to the two palæstræ, or courtyards, where the athletes performed their exercises. Then come various smaller mosaics, most of them coloured, the finest of which is one representing an unswept floor, with a row of tragic and comic masks along one side of it—a favourite subject in antiquity. This particular specimen is especially well laid, and the tesseræ are exceptionally small. From the farm of Tor Marancia, on the Via Ardeatina, comes another small still-life scene of fish and vegetables hanging up in a cupboard; this, and several large pavements in black and white mosaic, of a purely decorative character, were found in two ancient villas on this farm, which belonged to Munatia Procula and Numisia Procula, two Roman ladies who lived in the middle of the IInd century after Christ.

Hadrian's Villa is represented by a group of well-executed coloured mosaics with landscapes; a few fine pavements with geometric designs, however, are still to be seen *in situ* in the villa itself.

As far as composition goes, however, the

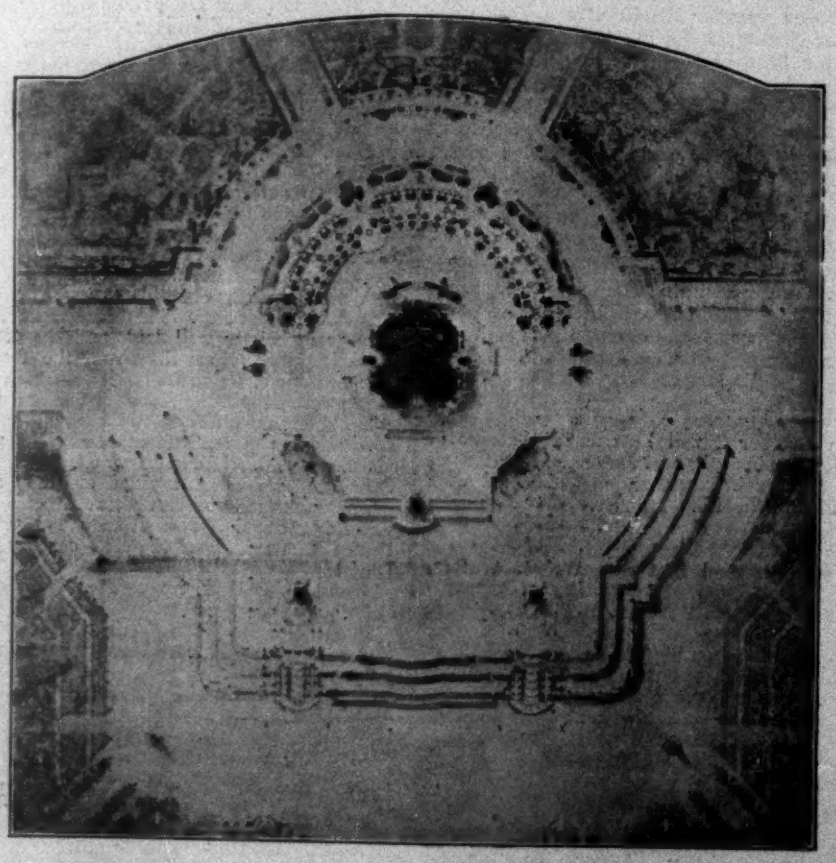
* *Collezioni archeologiche artistiche e numismatiche dei Palazzi Apostolici, pubblicate per ordine di Sua Santità Pio X. a cura dei Musei e delle Gallerie Pontificie e della Biblioteca Vaticana.* Vol. IV. I mosaici antichi conservati nei Palazzi Pontifici del Vaticano e del Laterano con introduzione del Dottor Bartolommeo Nogara. Atlas folio. Pp. X+46. Seventy-six plates. Milan: U. Hoepli, 1910. 200 lire (8*l.*).



"Monument to the Glory of the Independence of a Great Country." Design by M. René F. H. Mirland. Awarded the Grand Prix de Rome.
(From *l'Architecture.*)

palm must certainly be given to the large octagonal mosaic from the Thermæ of Ocriculum (the modern Otricoli), a town in Umbria, on the ancient Via Flaminia, not far from Narni, where the famous Bridge of Augustus is. It is, as all visitors to the Vatican know, placed to great advantage in the large Sala Rotonda of the Sculpture Museum; and it was completed externally by the addition of other less important mosaics in black and white, probably found elsewhere, which have been exposed to considerable injury from the continual traffic. In the room preceding the Sala Rotonda, the Sala a Croce Greca, which is at the head of the stairs as one enters the Museum, are other smaller mosaics let into the pavement, of which the finest is a coloured mosaic with a helmeted head of Minerva in the centre, found at Tusculum in 1741-6, in a villa popularly, but wrongly, supposed to be the Tusculan villa of Cicero, the site of which, while it cannot as yet be accurately fixed, was certainly a good deal lower down.

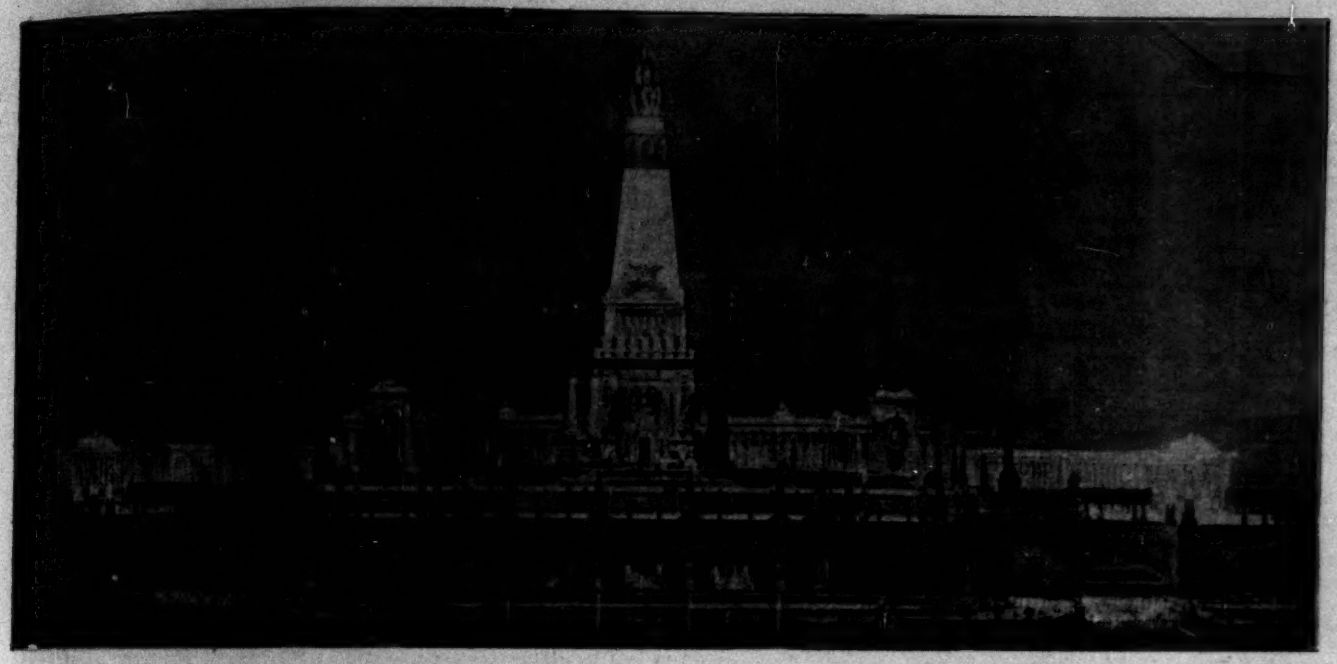
Another interesting pavement comes from Lorium, on the Via Aurelia, the birthplace of Antoninus Pius, now marked only by a large farmhouse in the middle of the desolate Campagna; it has no less than thirty-two scenes of actors and masks, a few of which are now exhibited in the Sala degli Animali (a room in the Vatican museum of sculpture devoted in the main to representations of various animals), while the rest are stored away; for the whole pavement, which had at first been laid down in the museum, was so much damaged that it had to be taken up in 1884. Similar damage has befallen a large carpet-like pavement from the Thermæ at Ostia, which still remains in the Sala dell' Immacolata Concezione, where the doctrine of the Immaculate Conception was promulgated by Pius IX. in 1854. It is, however, difficult to know how else, except as pavements, large floor mosaics could be effectively exhibited. Placed upon walls they are cumbrous and heavy, and fail of their due effect, while their faults of execution become too prominent. On the other hand, as pavements they have often been altered in shape to fit them to the rooms in which they are placed; and, being liable to damage, they are exposed to the necessity of restoration; and the modern Italian workmen are so skilful that it is often difficult to distinguish repairs from original work in mosaics which are not of the highest technical excellence. Dr. Nogara's patient researches into the records of their discovery have done much to establish the facts in this connexion, and, indeed, his text is mainly devoted to the discussion of their provenance and of the circumstances under which they were found, and to an accurate description of the mosaics themselves. Having placed the material at the disposal of students, he leaves to others artistic criticism and the collection of parallel examples elsewhere. It is worth remarking that none of the larger mosaics illustrated in the work before us were found before the end of the XVIIIth century, and that even of the smaller scenes none have been preserved to us from a period earlier than the beginning of that century. We have several drawings of pavements found in the XVIIth century (hardly any, one would say, from the XVIth), but it obviously was not thought practicable, or, at any rate, not worth while to remove them bodily and make use of them elsewhere. Ancient paintings, on the other hand, came somewhat earlier into favour—as is, indeed, natural from their greater technical excellence—and such paintings as the Aldobrandini Marriage and the Rome in the Palazzo Barberini were removed to places of safety as early as the XVIIth century, immediately after their discovery; while the study of decorative frescoes (as, for example, of those in the Golden House of Nero, under the Thermæ of Trajan, known, until lately, as those of Titus) began early in the XVIth century.



Plan. Design by M. René F. H. Mirland. Awarded the Grand Prix de Rome.
(From *l'Architecture.*)

The other work, the eleventh of the second of the two series of which we spoke* at the beginning, is of quite a different character. It is a reproduction of the well-known

* *Codices e Vaticanis selecti phototypice expressi iussu Pii PP. X. Consilio et opera curatorum Bybliothecæ Vaticanæ volumen xi.* Il libro di Giuliano da Sangallo (codice Vaticano Barberiniano Latino 4424) con introduzione e note di Cristiano Hülsen. 1 vol. text, folio; pp. IX + 104, seventeen plates. 1 vol. facsimiles, elephant folio, sixty-nine plates, with reproductions on both sides of the page. Leipzig: O. Harrassowitz, 1910 320 marks (16*l.*).



"Monument to the Glory of the Independence of a Great Country." Design by M. André J. L. Japy. Awarded the Premier Second Grand Prix de Rome.

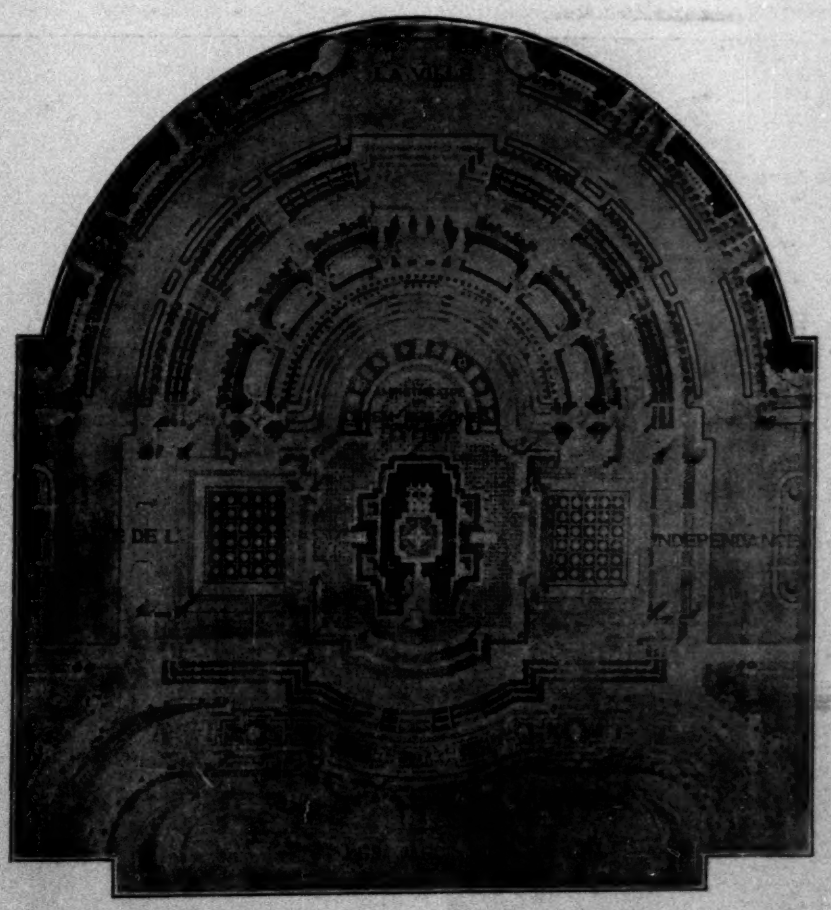
(From *l'Architecture.*

volume in which Giuliano da Sangallo, the famous Florentine architect, had gathered together all the specimens of architecture, ancient and modern, which, of what he knew, seemed to him to be of the greatest interest and beauty. It is a volume of seventy-five parchment leaves, originally consisting of five separate fascicules, the formation of which was begun in 1485, but bound up not earlier than 1514 nor later than 1516, the year of Giuliano's death. His son, Francesco, into whose hands the book fell, made a few additions in the vacant spaces upon some of the leaves, but did not add to their number.

The drawings are very various in subject and execution, but the great majority of them are not sketches, but drawings carefully executed and finished at home with ruler and compasses; and some of them, indeed, are copied from earlier originals by other artists, notably Francesco di Giorgio Martini of Siena, whose chief interest was in the study and designing of fortifications. With regard to the so-called *Codex Escurialensis*, an almost contemporary sketchbook by an unknown artist, the state of affairs is somewhat curious. In some cases it seems clear that Sangallo's drawings have served as a model for the artist who made those drawings—who was, as Dr. Hermann Egger has demonstrated in his edition of the *Codex* (see *Classical Quarterly*, Vol. III. (1909), 147), a pupil of Domenico Ghirlandaio—so that Sangallo must have actually lent the volume to Ghirlandaio; in others, as in the case of some of the views of Rome, which are common to both, each depends on a common original—a drawing of Ghirlandaio himself. This is all the more strange, as we know that Sangallo was much in Rome; but we find again that he often gives incorrect copies, not taken from the monuments themselves, but from earlier manuscript copies of the inscriptions, even of monuments so well known and accessible as the Column of Trajan and the Arch of Constantine in Rome. Further, in regard to his accuracy in general, we find that Giuliano's reconstructions are not infrequently quite arbitrary in important details.

But when all this has been said, we still have before us one of the most important series of archæological drawings that has come down to us from the Renaissance. It is one of the earliest in date, and certainly as fine as any in execution; and its value, not only from an artistic, but from an archæological point of view, is, therefore, very considerable. We learn much in regard to the topography, for Sangallo's drawings are almost the only record of more than one building which has now completely disappeared—such as a portico, perhaps connected with the Theatre of Marcellus at Rome, or at least situated near it, and of the so-called Torre di Boezio at Pavia. He alone, too, shows the Arch of Gallienus on the Esquiline in Rome with the two lateral openings which it originally possessed, but which were destroyed late in the XVth century, leaving only the single arch which is now preserved.

We learn much, too, as to the internal decoration of certain of the early Christian



Plan. Design by M. André J. L. Japy. Awarded the Premier Second Grand Prix de Rome.

(From l'*Architecture.*)

GRAND PRIX DE ROME.

Our illustrations of the designs of two of the successful competitors for the Grand Prix de Rome are reproduced from *l'Architecture*. The subject was "A Monument to the Glory of the Independence of a Great Country." M. Mirland, winner of the prize, was a pupil of M. Laloux, and was born in 1884. M. Japy, pupil of M. Pascal, was born in 1883. The winner of the Deuxième Second Grand Prix was M. Paul A. Tournon pupil of MM. Scellier de Gisors et Bernier.

buildings of Rome, now entirely destroyed or modernised—the Lateran baptistery, the Oratory of the Holy Cross (Oratorium Sanctæ Crucis) built on the north-west of it by Pope Hilarius in the latter half of the IVth century after Christ, and of the Pagan basilica of Junius Bassus on the Esquiline, converted to Christian uses at the same period. We possess so few examples of the marble incrustation of this time (S. Sabina at Rome and the Cathedral of Parenzo in Istria may be mentioned as among the best extant) that these drawings have an especial value from this point of view.

We have, too, numerous drawings of cornices, bases, capitals, and other architectural members (like those of the unknown artist of the first quarter of the XVIIth century, wrongly called Andreas Coner, whose sketchbooks are preserved in the Soane Museum in Lincoln's Inn Fields, and were published in facsimile in the *Papers of the British School at Rome*, Vol. II.). These Professor Hülsen has spent much labour in identifying; and, indeed, the whole of the volume of text which accompanies the larger volume of reproductions in facsimile bears evidence of his scholarly acumen and thoroughness, both in the introduction, in which he deals with the history of the volume, how it came to be formed, from what sources the drawings are derived, and how it was copied by later draughtsmen (notably by an artist who worked for Cassiano dal Pozzo in the first half of the XVIIth century, and whose copies from it are to be found both in the so-called Coner volume—which must once have belonged to dal Pozzo—and in one of the volumes of archæological drawings purchased from Cardinal Alessandro Albani, to whom they eventually passed from the dal Pozzo family, by King George III., and now preserved in the Royal Library at Windsor), and in the text, in which he deals elaborately and carefully with every drawing separately, and with the archæological, architectural, and artistic information which may be extracted from them.

The improvement of processes of reproduction has fortunately rendered the publication in facsimile of drawings of such importance a comparatively simple, though still a somewhat costly matter; and the more of such publications that can be made the greater will be the service that will be done to students. To compare the various drawings scattered through the public and private libraries of Europe by means of notes is no easy matter, whereas from photographs one can tell at a glance which are or are not identical, or do or do not derive from a common archetype; and from such studies we shall learn, not merely more about antiquity, but more about the history and development of Renaissance art and architecture, and what were the ancient originals which were then the special objects of study and attention. There must have been many pattern-books, the originals of which go back to some architects of distinction, in which were grouped plans and details which students would find useful (the drawings of the so-called Coner, carefully measured, obviously not copied directly from the original, but from some unknown archetype and classified according to subject, form an excellent example); and to discover what these archetypes were, of what they consisted, and by whom they were put together would be of great interest. We must not forget that the so-called Coner was directly copied by Michelangelo in some of his architectural studies in red chalk, preserved both at the British Museum and in the Casa Buonarroti at Florence.

Finally, publication in facsimile is certainly the best method of insurance against fire or theft that could possibly be adopted, and is therefore of paramount importance in the case of MSS. or drawings of value.

MEMORIAL TO EDWARD VII. IN CRATHIE CHURCH.

On Monday, the King, in Crathie Parish Church, unveiled a memorial to King Edward, which takes the form of a marble communion table and an oak screen. The memorial is placed in the east end of the chancel, the table being of Iona marble, white, with veins of green and black. Between 6 ft. and 7 ft. in length, and standing 3 ft. in height, it is arranged in front into three panels, with one at each end, while the top is formed of a solid slab. In the background is a carved oak screen that rises against the wall to a height of about 8 ft. The wood, which was obtained from a country house in Leicester, is over 300 years old. The carving is in the late Scottish Gothic style.

The memorial was designed by the architects of the church, Messrs. A. Marshall Mackenzie & Son. The communion table was the work of Messrs. Galbraith & Winton, Glasgow, and the carved oak screen, that of Messrs. J. and A. Ogilvie, Aberdeen.

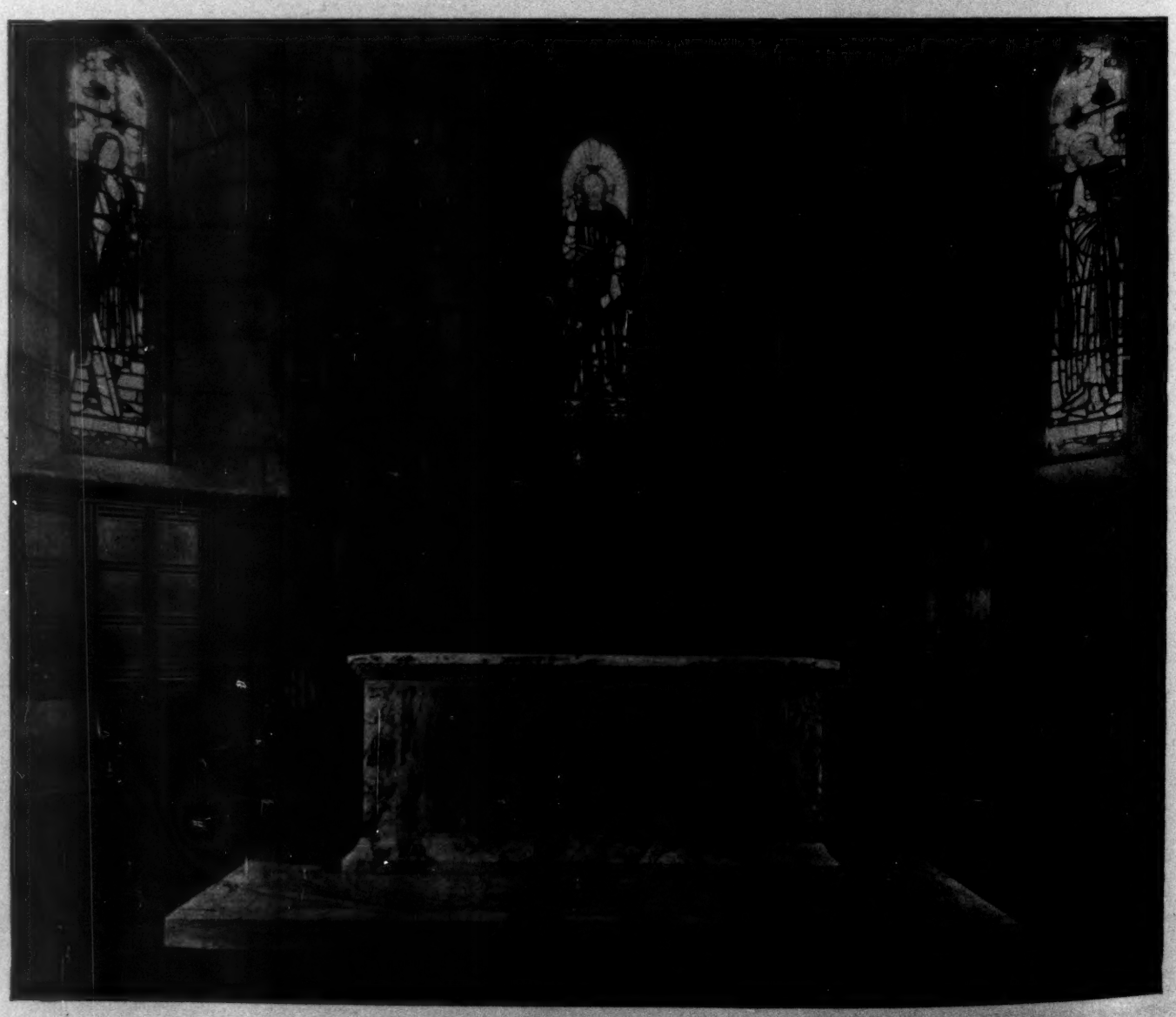
GENERAL NEWS.

Professional Announcement.

Mr. Theodore Fyfe has removed from 4, Gray's Inn-square, W.C., and his business address will in future be 2, Montague-place, Russell-square, W.C. Telephone: 1320 Central.

Bequest for Bristol Cathedral.

The late Mr. C. Y. Sturge, of St. Augustine's-mansions, Bloomberg-street, Westminster, and of Rodborough Heights, Gloucestershire, who represented Westminster on the London County Council, left estate valued at 11,237*l.* gross, of which 9,847*l.* is net personalty. He left to the Dean and



Memorial to King Edward, Crathie.
Messrs. A. Marshall Mackenzie & Son, Architects.

Chapter of Bristol Cathedral 1,000*l.* for any purposes connected with the services or adornment of the Cathedral, expressing the desire, but without creating any trust in that respect, that it should be expended wholly or partly either on the completion of the cloisters or on a stained glass window for the nave; and if he shall not have fulfilled such bequest in his lifetime a further 200*l.* for filling the vacant niches in the south side of the abbey gateway with appropriate articles, in accordance with the scheme prepared by him in 1905 in conjunction with Mr. Walter Reed, of Messrs. Frost & Reed, of Bristol.

The Society of Architects.

The Society will be officially represented at the Ninth Architectural Congress at Rome by Mr. Percy B. Tubbs, F.R.I.B.A., Vice-President, and Mr. R. G. Lovell, Member of Council.

The Society will be officially represented at the Crystal Palace Mansion House Conference, October 23, by Mr. Geo. E. Bond, J.P., President, and Mr. Percy B. Tubbs, F.R.I.B.A., Vice-President.

London Salon of Photography.

The London Salon of Photography has just been opened for a six weeks' season at the galleries of the Royal Water-Colour Society, 5A, Pall Mall East. The aim of the Salon Exhibitions, as expressed in the catalogue, is to encourage those in whom individual aim and feeling have found expression by means of the camera. There are over two hundred pictures in the galleries. A large number of the pictures exhibited have an architectural motif, although cathedral studies are few. The repairing of Winchester Cathedral has been seized upon by Mr. C. David Kay for a pictorial effect, Pierre Dubreuil shows Notre Dame de Paris in a new setting, and Mr. F. H. Evans has a bay of the north porch of Chartres. Mr. John H. Anderson has taken for his subject Cannon-street railway-station, Dr. Eversheds, Lambeth Bridge, and Mr. Hector Murchison has made a picture out of the chimneys of the Adelphi. Several Salon evenings have been arranged, one of the lecturers being Mr. Arthur Marshall, A.R.I.B.A., who also contributes a Venetian study to the walls of the Exhibition.

Instruction in Structural Engineering and Reinforced Concrete.

Up till recently no adequate course of instruction was available for students of reinforced concrete, but last winter the deficiency was repaired by the establishment of classes in this subject at the London County Council School of Building, Ferndale-road, Brixton, S.W., the lecturer being Mr. H. Kempton Dyson, the Secretary of the Concrete Institute. The course was a very complete one, and the demand for such instruction resulted in a large attendance and necessitated an extension of the scheme, an elementary theory class being formed and two assistant teachers appointed. Though the subject of reinforced concrete is taught in many places abroad, the course at the School of Building is distinctive in respect to the great feature made of practical work, which is of the utmost importance to a knowledge of theory and the proper execution of the work. Those who seek to design work are required to take both the practical and theoretical instruction, but the practical part is so arranged that it can be taken independently by builders, clerks of works, foremen, craftsmen, and others who only wish to study this aspect. A complete course of instruction extends over four years, various other classes at the School have been utilised in the preliminary stages, and the opportunity will be taken in giving the necessary instruction in the principles of structural design to show their application to all constructive materials.

Battersea Polytechnic.

The calendar of the Battersea Polytechnic for the new session, which opens on Monday, September 25, gives details of the courses and classes held at the Institution. Full day and evening courses in preparation for the Intermediate and Final degree examinations in Science and Engineering are offered, and the lecturers in the various subjects are fully recognised by the University of London, so that students attending the Polytechnic may be registered as internal students of the University of London. In the day technical college, full-time courses are arranged in mechanical, civil, electrical, and motor engineering, architecture and building, chemical engineering and art, the courses covering a period of three years, at the end of which time students passing the necessary examinations are awarded the Polytechnic Diploma. Concurrently with the Diploma courses, students can prepare for and take the Degree courses in science and engineering of the University of London. In addition to the scholarships already existing, the governing body have instituted one of 40*l.* a year for three years tenable at the day technical college. Evening courses are provided in the departments of mechanical engineering and building trades, electrical engineering, mathematics, physics, chemistry, natural science, photography, art. Special mention may be made of the following new developments:—In the Mechanical Engineering Department the governing body have arranged a course of lectures on "Illuminating Engineering." In the Electrical Engineering Department special attention is being given to the subject of electric traction, and new machinery and apparatus are being purchased in order that the subject may be more fully and thoroughly dealt with. In the Physics Department the course on acoustics for music students will be repeated, and a class in physical chemistry for chemistry students has been arranged. In the Chemistry Department the chemical engineering course has been extended by the addition of a practical class. Attention may also be drawn to the chemistry course for sanitary inspectors.

Provincial Housing Problems.

Evictions have been taking place in Winchester, various dwellings having been declared by the City Council to be unfit for habitation. The absence of alternative accommodation has caused some distress to the victims, but the difficulty will be met in the near future by the erection of eighty-two new dwellings. This seems to be an opportunity not only for a general consideration of the local housing problem, but for the preparation of a scheme capable of expansion to anticipate the demands of the future.

At Coventry there seems to be still more discomfort, in spite of efforts made by the Corporation to provide suitable accommodation. The scarcity of dwellings is said to be so extreme that marriages have had to be postponed until facilities are forthcoming for setting up housekeeping.

On the other hand, there seems to be too much room at Stapleford and Sandiacre, near Nottingham, where the building trade is almost at a standstill. In the first-named township about a hundred houses are said to be vacant, and a local builder can find employment for only a dozen men. Whether this points to overbuilding in the past or to some unusual industrial dislocation is a matter for inquiry. Progress seems assured further north in the county, for the Education Committee propose to build a school to accommodate about 600 children of the parishes of Blidworth and Rufford. This is the result of colliery developments near Rainworth.

Apothecaries' Hall, Blackfriars.

The Society of Apothecaries are about to dispose of some 12,000 ft. super. of their lands in Water-lane, in the parish of St. Anne, Blackfriars. Having separated from the Grocers' Company, they obtained a charter of incorporation dated on December 6, 1617, with a further charter on January 29, 1685. They thereupon established themselves in Cobham House, the Lady Howard of Effingham's property, which they adapted for their purposes, in Blackfriars (since Water) Lane, and standing on the north side of Playhouse-yard. The Society's hall, dispensary, laboratories, and other premises, as rebuilt in 1676-7, were improved and enlarged in 1786.

Proposed Bridge, Glasgow.

The Corporation are again considering the much-vexed question of supplying further facilities for traffic across the Clyde. The Tramways Committee have framed proposals for building a bridge a short distance upstream from Glasgow Bridge to relieve the traffic from Jamaica (north) and Bridge and Portland streets (south), with an approach from Argyll-street through St. Enoch-square, and from Broomielaw and West Clyde-street. That project would involve, in all likelihood, the demolition of St. Enoch's Church in the square and the laying of tramway lines along Buchanan-street.

Tattershall Castle Fireplaces.

The purchasers of these famous accessories to the ruined castle in Lincolnshire have agreed to stop the work of removal until to-day (Friday), and will resell to the National Trust if 3,000*l.* is forthcoming by to-morrow. The sum of 5,000*l.* will effect the purchase of the castle complete with its mantelpieces.

Property Sales.

The list of properties just placed in the market comprises the fine early Jacobean manor house at Fritwell, near Bicester, Oxon, formerly the seat of the Willes family, and restored and refitted by Thomas Garner for his own residence; Allan Bank, near Ambleside, the home in 1808-11 of William Wordsworth, who there, it is said, wrote the greater portion of "The Excursion"; Broome Park, an estate of 3,550 acres, situated in several parishes between Canterbury and Folkestone, and the original of the Tappington of "The Ingoldsby Legends"; the late Miss C. A. Sulivan's estate, extending over 55 acres, in Fulham, and including Carnwarth House, the home of Bernard Lintot, Sir James Lowther (Lord Lonsdale), and Lady Shelley, Broom House, sold to the Hon. Lawrence Sulivan, who married Lord Palmerston's sister Elizabeth, and Broom Farm, whence there was a ferry to the Feathers at the outfall of the Wandle; Blair Drummond, in Perthshire, 7,000 acres, the seat of the late Colonel Home Drummond and of his house for nearly three centuries past; Hodroyd Hall, near Doncaster, Lord Galway's seat of 1,000 acres, with a mansion built by Sir Thomas Gargrave, *temp.* Elizabeth; Poynton, Cheshire, which, having continued in the Warren family for five centuries, was bequeathed to Lady Vernon by the daughter of Sir George Warren (*ob.* 1801); Burwell Park (1,460 acres), Louth, Lincs, seat of the Listers and birthplace of Sarah, Duchess of Marlborough (on the estate are the ruins of a Benedictine priory founded by John de Hay and given to St. Mary's Abbey, near Bordeaux); and Aldwych Theatre, built after Mr. W. G. R. Sprague's designs, for Mr. Seymour Hicks, in 1904-5.

OBITUARY.

Mr. W. H. Hill.

The death is announced of Mr. William Henry Hill, B.E., of the firm of Messrs. W. H. Hill & Son, of Cork, and Fellow of the Royal Institute of the Architects of Ireland. Mr. Hill was elected a Fellow of the Royal Institute of British Architects in 1888. Of the more important of the works carried out by him and the firm, we may mention the following:—

In Cork and the county—Roman Catholic Church, Cork Lunatic Asylum (1899), Consumption Sanatorium at Streamhill, Doneraile (with Mr. R. Evans, 1906), Council Chamber, etc., Court House, the River Lee bridge, near Queen's College, and premises for the Young Men's Association, South Mall, Cork; repair and restoration of Castlemaguire, Carrigrohan (with new spire), and Moveddy churches; Provincial Bank, and Auxiliary Asylum extension, Youghal; Kilbonane Parish Church and new sanctuary; Celtic Cross, Soldiers' Memorial, Gill Abbey; artisans' dwellings for Queenstown Naval Dwellings Company (1902-6); and many houses, villas, and business premises in Cork, Bandon, Douglas, Glasheen, Innishannon, Gill Abbey, Mallow, Fermoy, and around. In Tipperary—Villa residence in Carrigaloe and houses for Lord Barrymore, and the Soldiers' Home (1901). The firm were engineers for the intake installation, service reservoir, and ancillary works for the Mallow Rural District Council at Buttevant (1907).

Mr. E. B. Thornhill.

The late Mr. Edward Baylies Thornhill, M.Inst.C.E., entered the offices of the London and North-Western Railway Company in 1862, and, after forty years' service, was appointed chief engineer. He retired two years ago. He made the plans for the new docks at Garston, the widening of the railway into Euston, and the reconstruction of Lime-street Station, Liverpool.

EDITORIAL SUMMARY.

THE leading article is entitled "A Quaint Text-Book of 1734," the text-book in question consisting of two volumes of "The Builder's Dictionary," published in that year.

The second leading article, "The Lesson of Tattershall Castle" (p. 293), deals with the mutilation of the XVth-century castle there.

Notes (p. 293) include: "Restorations of Ancient Rome"; "Stonehenge and Cyrene"; "Influence of the Sun on Buildings"; "New York Building Code"; "The Problem of Ventilation."

"The Story of the Bridge," illustrated, is continued in part VI. of this series of articles, stone bridges and their types being dealt with (p. 294).

"Publications Relating to the Papal Collections in Rome" is the title of an article on p. 297.

Illustrations of the 1st and 2nd Grand Prix de Rome Prize Designs are given on pp. 293 and 299.

The Illustrated Monthly Historical Review (p. 303) includes: "Archæological Restorations by French Architects"; "The Roman Forum"; and Notes.

The Building Trade (p. 308) includes: "Recent Workmen's Compensation Cases—II."; "The Trade Union Congress"; "Concrete-mixing Installation"; "General Building News"; "Projected New Buildings in the Provinces," etc.

The greater part of a paper by Mr. Percy E. Nobbs, read before the Royal Architectural Institute of Canada at Winnipeg, is given on p. 312.

In Law Reports will be found a brief notice of the case of "Howlett v. Harrods, Ltd." (p. 314).

THE INTERNATIONAL CONGRESS OF ARCHITECTS.

From the Programme of the Ninth International Congress of Architects, Rome, we take the following particulars:—

Monday, October 2.

9 a.m.—12.—Meeting of Permanent Committee and of the General Committee of Organisation for appointment of President and Council, etc.
2 p.m.—Visit of all members of the Congress to the tombs of the Kings of Italy, and to that of Raphael in the Pantheon.
4—7 p.m.—Visit to the monument to Victor Emmanuel II.
7.30 p.m.—Dinner given by the Committee of Organisation to the delegates of foreign Governments and to the members of the Permanent Committee.
10 p.m.—Reception by the Associations of the Artists of Rome, by arrangement with the Committee of Organisation, to all members of the Congress in the rooms of the Associazione Artistica Internazionale.

Tuesday, October 3.

10 a.m.—Meeting of the reporters of the various subjects at Castel S. Angelo 9—12. Visits to monuments and exhibitions.
12.30 p.m.—Luncheon given by the Committee of Organisation to the delegates of foreign and national associations.
3—5 p.m.—Inaugural session at the Capitol in the hall of the Horatii and Curatii.
10 p.m.—Reception by the Syndic in the Capitol.

Wednesday, October 4.

9 a.m.—12.—First meeting of the Congress at Castel S. Angelo for the discussion of special subjects.
12.30 p.m.—Free for private invitations.
2—7 p.m.—Visits to monuments and exhibitions.

Thursday, October 5.

9—11 a.m.—Second general meeting of the Congress, discussion.
11 a.m.—12.—Lecture by Professor Corrado Ricci, Director of Antiquities and Fine Arts on the Imperial Fora.
2 p.m.—Visits to monuments and exhibitions.
5—8 p.m.—Garden party.

Friday, October 6.

Excursions in the neighbourhood at pleasure. Evening free for receptions by foreign Embassies to the architects of their respective countries.

Saturday, October 7.

9—11 a.m.—Third general meeting of Congress. Discussion and lecture by Professor Stübben on the laying-out of towns.
2—7 p.m.—Visit to monuments and exhibitions.
10 p.m.—Reception.

Sunday, October 8.

Picnic *Ottobrata* (lunch given by the Committee of Organisation to all the members of the Congress).
4—9 p.m.—Reception by the Minister of Public Instruction in the Casino of the Villa Borghese.

Monday, October 9.

9 a.m.—12.—Fourth general meeting of the Congress, discussion and lectures.
2—7 p.m.—Visit to monuments and exhibitions.

Tuesday, October 10.

9 a.m.—12.—Closing meeting of the Congress.
2—7 p.m.—Visit to monuments and exhibitions.
8 p.m.—Farewell banquet (by payment of 20 francs).

Wednesday and Thursday, October 11 *and* 12.

Excursions at pleasure in the neighbourhood.
Excursion to Venice.—Train leaves Rome on the evening of the 12th.

Friday, October 13.

2 p.m.—Meeting of the Congress at the Doge's Palace. Visit to the Campanile of San Marco.

Saturday, October 14.

Excursion to the Venetian estuary by invitation of the Town Council of Venice.

Sunday, October 15.

Visit to monuments.

The following excursions have been arranged in the neighbourhood of Rome:—I. Ostia, II. Subiaco, III. Orvieto, IV. Tivoli and Villa of Hadrian, V. Anagni and Ferentino, VI. Corneto, VII. Castelli Romani, VIII. Viterbo, IX. Cori, Fossanova, Ninfa.

By virtue of a special concession on the part of the Italian Association of hotel proprietors (Roman section) members of the Congress of Architects may, on proving their identity, avail themselves of the reduced charges in hotels. Names of hotels and particulars will be found on the programme.

COMPETITION NEWS.

Manchester Art Gallery.

To-morrow is the receiving day for the designs by the ten selected competitors in this important competition, and architects throughout the kingdom will await with interest the verdict of Professor Blomfield.

Deptford Central Library.

The Public Libraries Committee report having further considered the question of obtaining the services of a quantity surveyor for the erection of the Central Library, and have come to the conclusion that it would be in the Council's interests to communicate with a number of quantity surveyors of repute, to be selected by the Committee, inquiring whether they would be prepared to carry out the above-mentioned work at a remuneration of 1¼ per cent. of the lowest tender, such fee to include the cost of printing and lithography, also to ask those firms who were prepared to accept the terms mentioned, at what figure they would be prepared (1) to measure up for the various certificates granted during the progress of the work; (2) to measure and adjust variations, on the understanding that when omissions and additions are set against each other on provisional amounts the commission will only be paid on the difference and not on the provisional amounts; (3) to measure for and adjust the final accounts of the building.

School, Tranent, Scotland.

Some time ago Tranent School Board invited plans and estimates for a new school proposed to be erected on the Ormiston-road, Tranent. There were six sets of plans, and after consideration the award was given to Mr. Peter Whitecross, architect, Prestonpans, whose plans, with relative cost of 5,000*l.*, were accepted.

School, Little Clacton, Essex.

A new Council School is proposed to be erected at Little Clacton, Essex. Competitive designs have been submitted to the Committee, who have accepted the designs sent in by Messrs. Tomkins, Homer, & Ley, of 214, Bishopsgate, E.C., and Frinton-on-Sea, and appointed them architects for the new buildings.

INTERCOMMUNICATION COLUMN.

Wind Pressure.

SIR,—A detached public building is proposed to be erected to plans passed by Council. These plans are certified by engineer to be strong enough to withstand any wind pressure that could now get to it. Can the Council ask for the building to be certified strong enough to withstand wind pressure if whole surrounding district was obliterated and this one building left?

TANNER.

Leyton.

ILLUSTRATIONS.

Oxford-circus.

THE illustration shows the design prepared for Jays, Ltd., by Mr. Henry Tanner, which has been adopted by the Crown authorities for the rebuilding of the whole of the circus, when the present Crown leases fall in.

The other three segments of the circus will, therefore, be rebuilt in accordance with this design.

House and Gardens, Mellerstain.

MELLERSTAIN, the seat of Colonel Lord Binning, C.B., is a very large house of two dates—an earlier house now forming one of the advanced wings of the forecourt on the north side designed by John Adam, father of the brothers Adam, and dating from about 1720, and the main block, the large building shown in the background of the drawing designed by Robert Adam, and containing what is probably the finest suite of ceilings by that architect in existence. On the outside there are no details, and Robert Adam for reasons unknown allowed himself to drop into the bastard Gothic of the XVIIIth century, hence the battlements on a house otherwise of a regular Georgian type. There were no gardens round the house. On the other hand, some 450 yds. to the south of the house and some 90 ft. below it is a large piece of water laid out as a "canal," oblong in plan, with segmental ends and returns and surrounded by beech woods. This canal has now been restored to its original shape, and the object of the design has been to make use of the fall of the ground and to bring the house into touch with the canal in one consecutive scheme, the axis line starting from the centre of the south front of the house and ending at the further end of the canal, a distance of some 765 yds. Advantage has been taken of a hollow in the brow of the hill to form a concave demi-lune with straight returns, and from the foot of this a grass walk 100 ft. wide is to lead down to the steps and balustrade at the near end of the canal. In execution several deviations from the design shown on the drawing are being made by the architect, Professor Reginald Blomfield, A.R.A. The stone used is Black Pasture stone. The contractor is Mr. Millar, of Edinburgh.

Ancient Rome.

THE reproductions of M. Bigot's model and plan of Ancient Rome are in connexion with Mr. Ashby's article on restorations by French architects exhibited at Rome (p. 303).

FIFTY YEARS AGO.

From the *Builder* of September 14, 1861.

Improved Granaries.

THE agricultural journals of France draw attention to a new system of preserving wheat. It consists of pits dug in the earth and lined with masonry or brickwork, which is afterwards coated with thin sheet iron. The War Department of France, by way of experiment, had 576 quintals (the quintal is 2 cwt.) of wheat buried for the space of 25½ months in such pits; and the result, says the *Economist*, was that the grain was preserved in excellent condition.

15, 1911.

NICATION
IN.

sure.

building is proposed
d by Council. These
gineer to be strong
wind pressure that
e Council ask for the
ong enough to with-
whole surrounding
nd this one building
TANNER.

TIONS.

cus.

shows the design
ays, Ltd., by Mr.
which has been
Crown authorities
whole of the circus,
ases fall in.
s of the circus will,
ecordance with this

Mellerstain.

of Colonel Lord
large house of two
forming one of the
ecourt on the north
dam, father of the
g from about 1720,
rge building shown
drawing designed
containing what is
of ceilings by that
the outside there
Adam for reasons
to drop into the
18th century, hence
ise otherwise of a
ere were no gardens
other hand, some
he house and some
piece of water laid
in plan, with sec-
nd surrounded by
has now been re-
nd the object of the
e of the fall of the
use into touch with
e scheme, the axis
of the south front
the further end of
e 765 yds. Advan-
llow in the brow of
ve demi-lune with
e foot of this a grass
down to the steps
end of the canal.
iations from the
ng are being made
Reginald Blomfield,
is Black Pasture
r. Millar, of Edin-

ue.

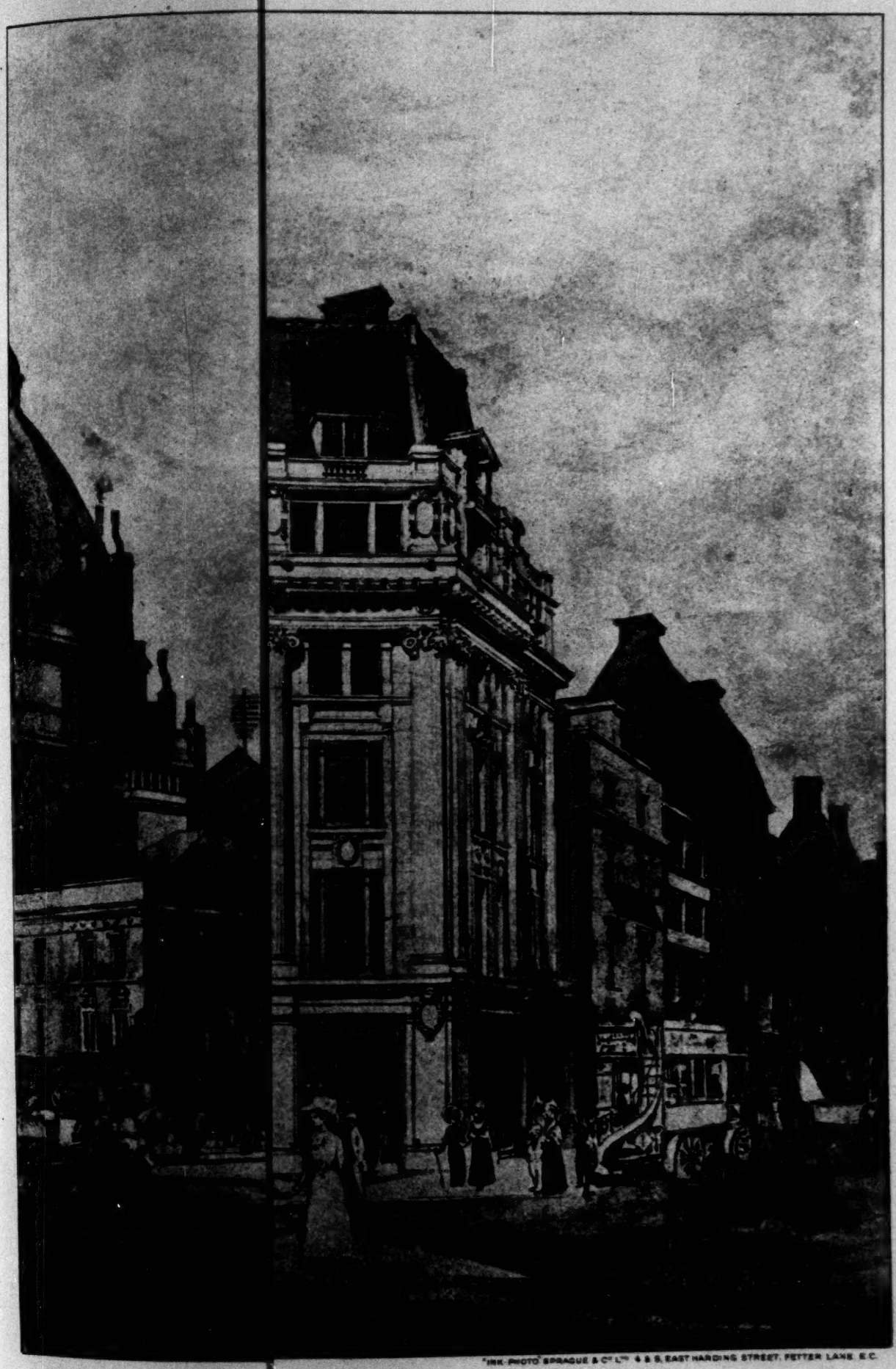
Bigot's model and
in connexion with
orations by French
e (p. 303).

AGO.

tember 14, 1861.

ries.

s of France draw
m of preserving
dug in the earth
brickwork, which
thin sheet iron.
France, by way
ntals (the quintal
for the space of
d the result, says
e grain was pre-
n.



"INK-PHOTO" SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

E PRESENT CROWN LEASES FALL IN.

INTERCOMMUNICATION COLUMN.

Wind Pressure.

SIR,—A detached public building is proposed to be erected to plans passed by Council. These plans are certified by engineer to be strong enough to withstand any wind pressure that could now get to it. Can the Council ask for the building to be certified strong enough to withstand wind pressure if whole surrounding district was obliterated and this one building left?

TAUCHER.

Leyton.

ILLUSTRATIONS.

Oxford-circus.

THE illustration shows the design prepared for Jays, Ltd., by Mr. Henry Tanner, which has been adopted by the Crown authorities for the rebuilding of the whole of the circus, when the present Crown leases fall in.

The other three segments of the circus will, therefore, be rebuilt in accordance with this design.

House and Gardens, Mellerstain.

MELLERSTAIN, the seat of Colonel Lord Binning, C.B., is a very large house of two dates—an earlier house now forming one of the advanced wings of the forecourt on the north side designed by John Adam, father of the brothers Adam, and dating from about 1720, and the main block, the large building shown in the background of the drawing designed by Robert Adam, and containing what is probably the finest suite of ceilings by that architect in existence. On the outside there are no details, and Robert Adam for reasons unknown allowed himself to drop into the bastard Gothic of the XVIIIth century, hence the battlements on a house otherwise of a regular Georgian type. There were no gardens round the house. On the other hand, some 450 yds. to the south of the house and some 90 ft. below it is a large piece of water laid out as a "canal," oblong in plan, with segmental ends and returns and surrounded by beech woods. This canal has now been restored to its original shape, and the object of the design has been to make use of the fall of the ground and to bring the house into touch with the canal in one consecutive scheme, the axis line starting from the centre of the south front of the house and ending at the further end of the canal, a distance of some 765 yds. Advantage has been taken of a hollow in the brow of the hill to form a concave demi-lune with straight returns, and from the foot of this a grass walk 100 ft. wide is to lead down to the steps and balustrade at the near end of the canal. In execution several deviations from the design shown on the drawing are being made by the architect, Professor Reginald Blomfield, A.R.A. The stone used is Black Pasture stone. The contractor is Mr. Millar, of Edinburgh.

Ancient Rome.

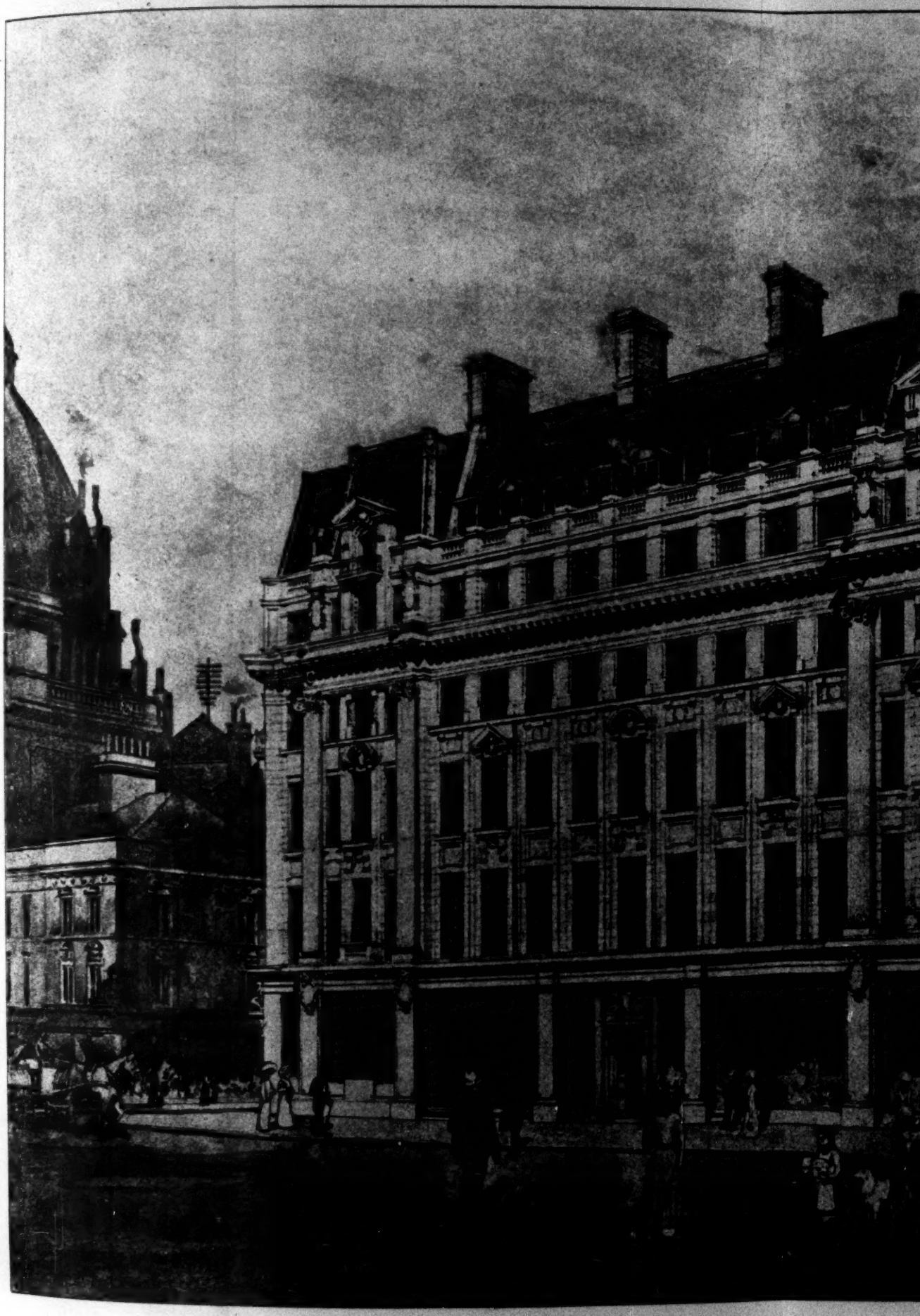
THE reproductions of M. Bigot's model and plan of Ancient Rome are in connexion with Mr. Ashby's article on restorations by French architects exhibited at Rome (p. 303).

FIFTY YEARS AGO.

From the *Builder* of September 14, 1861.

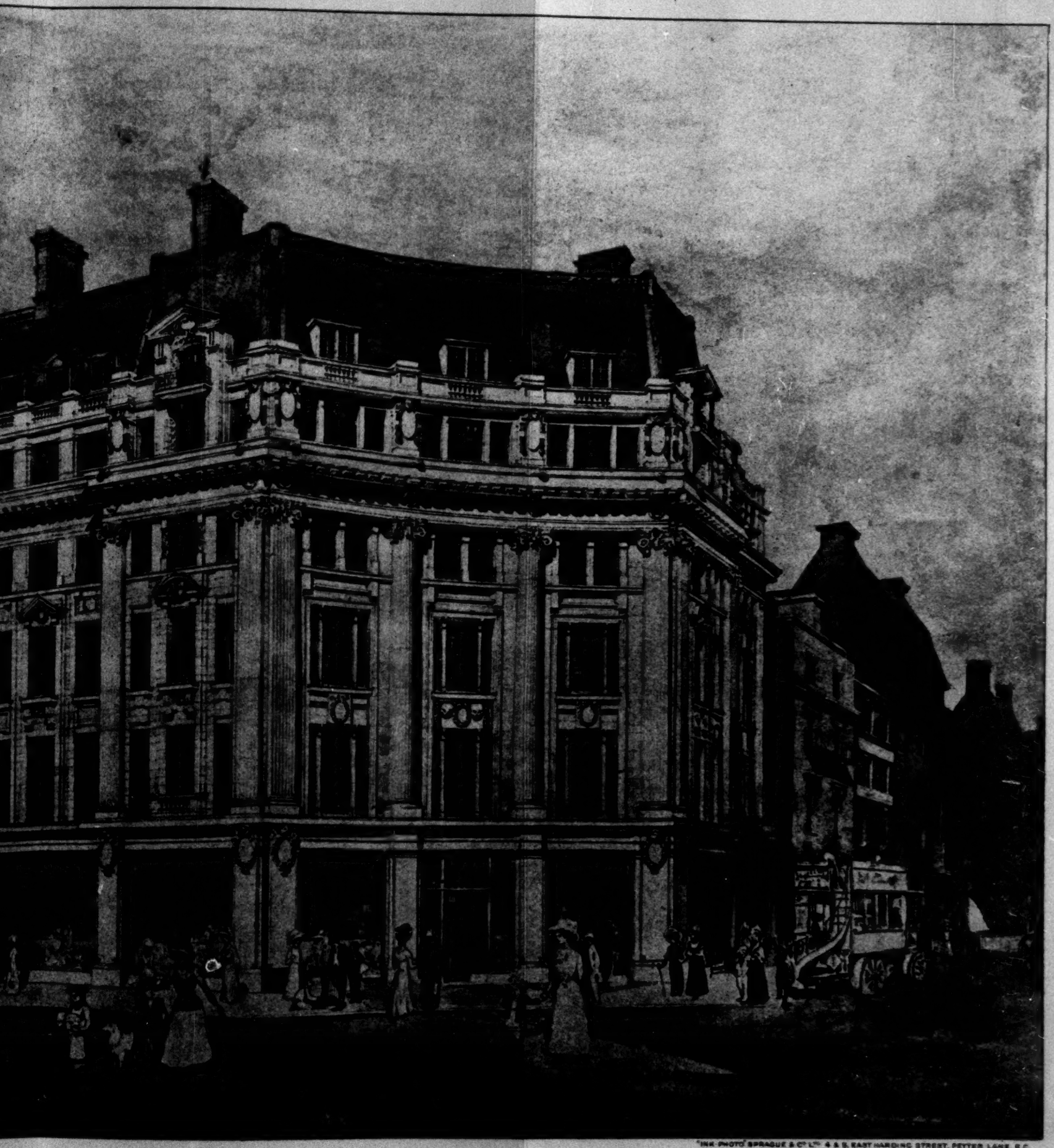
Improved Granaries.

THE agricultural journals of France draw attention to a new system of preserving wheat. It consists of pits dug in the earth and lined with masonry or brickwork, which is afterwards coated with thin sheet iron. The War Department of France, by way of experiment, had 576 quintals (the quintal is 2 cwt.) of wheat buried for the space of 25½ months in such pits; and the result, says the *Economist*, was that the grain was preserved in excellent condition.



DESIGN ADOPTED BY THE COMMISSIONERS OF WOODS AND FORESTS FOR TH

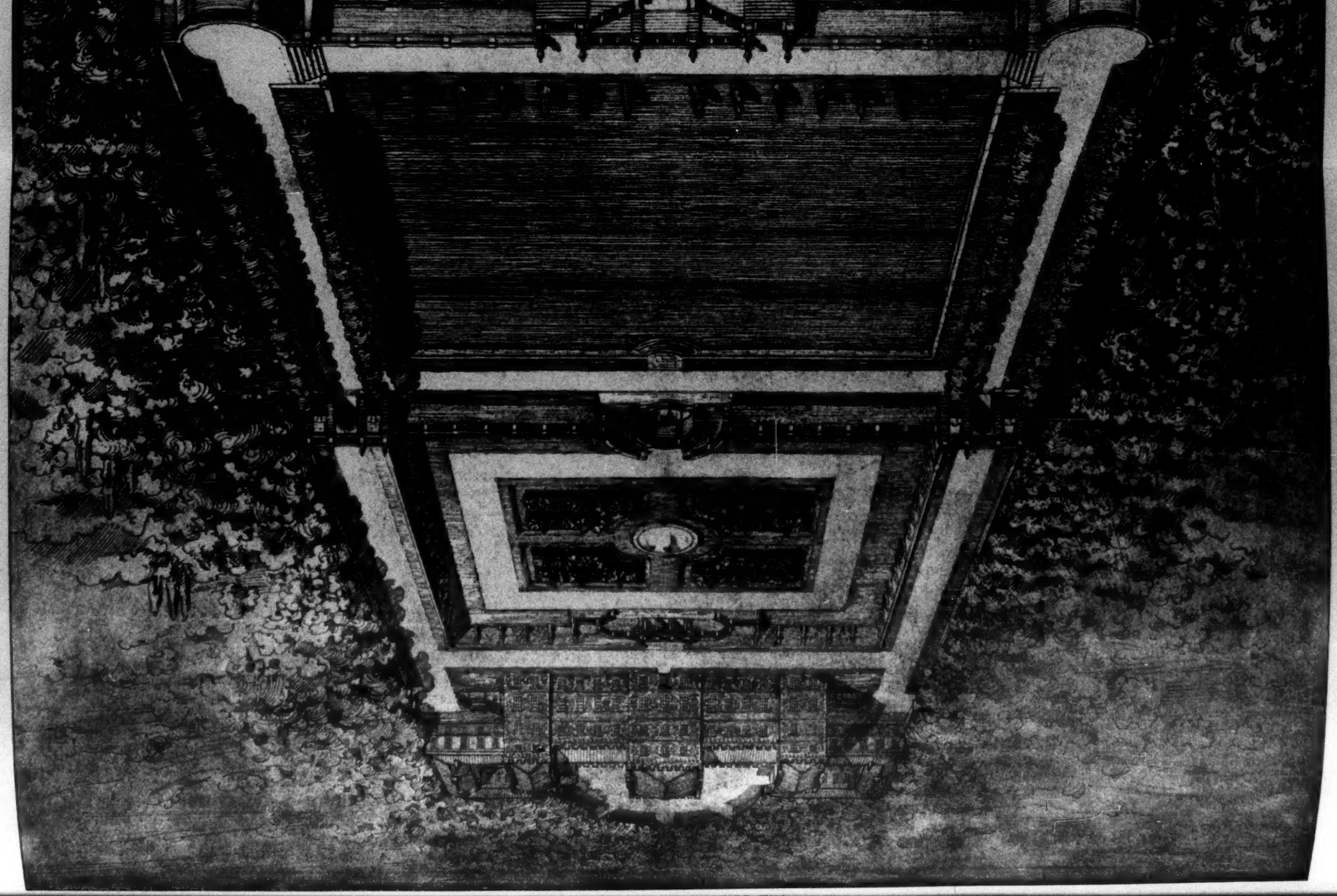
PREMISES FOR JAYS LIMD., S.W. CO

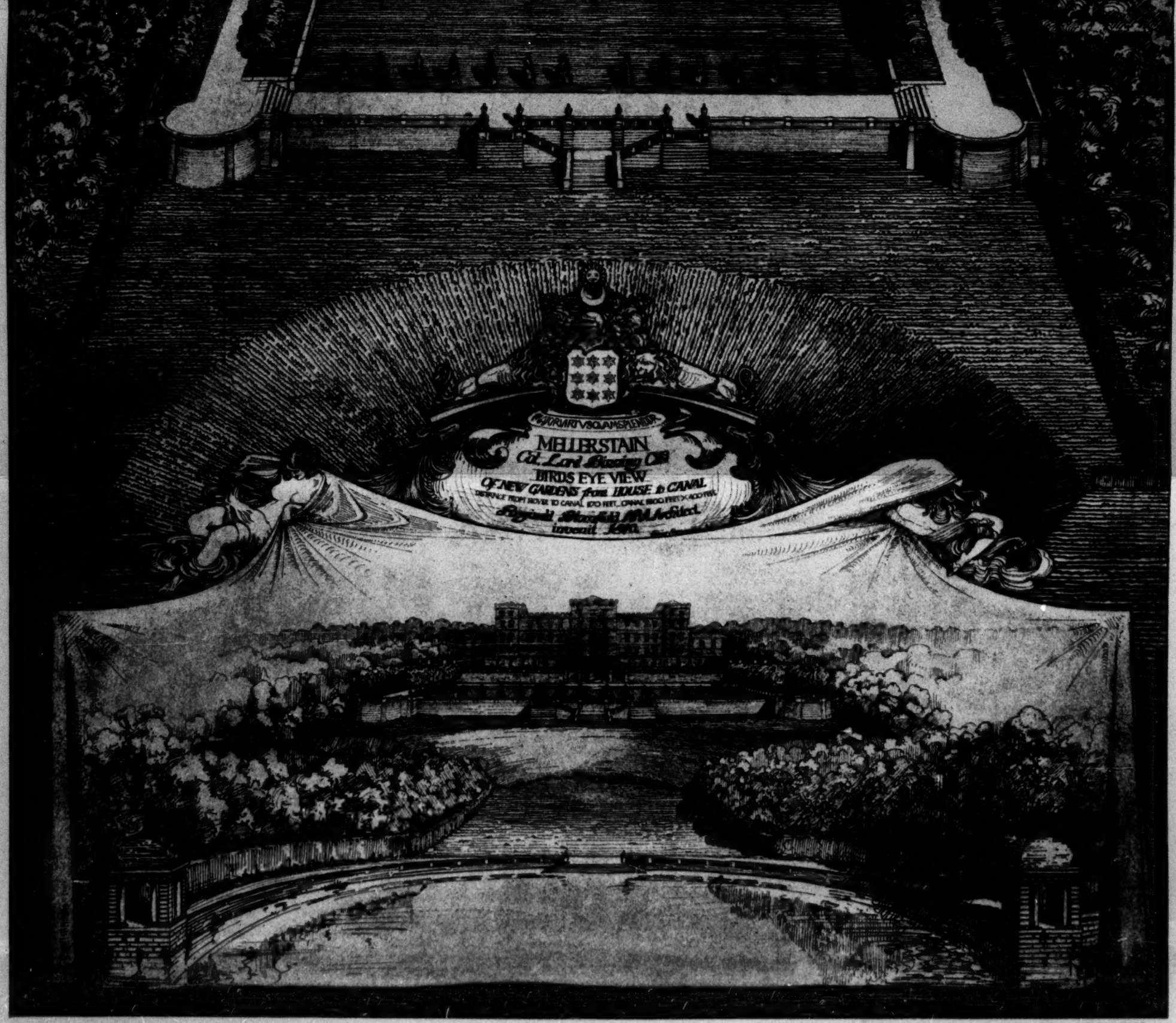


"INK-PHOTO" SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.

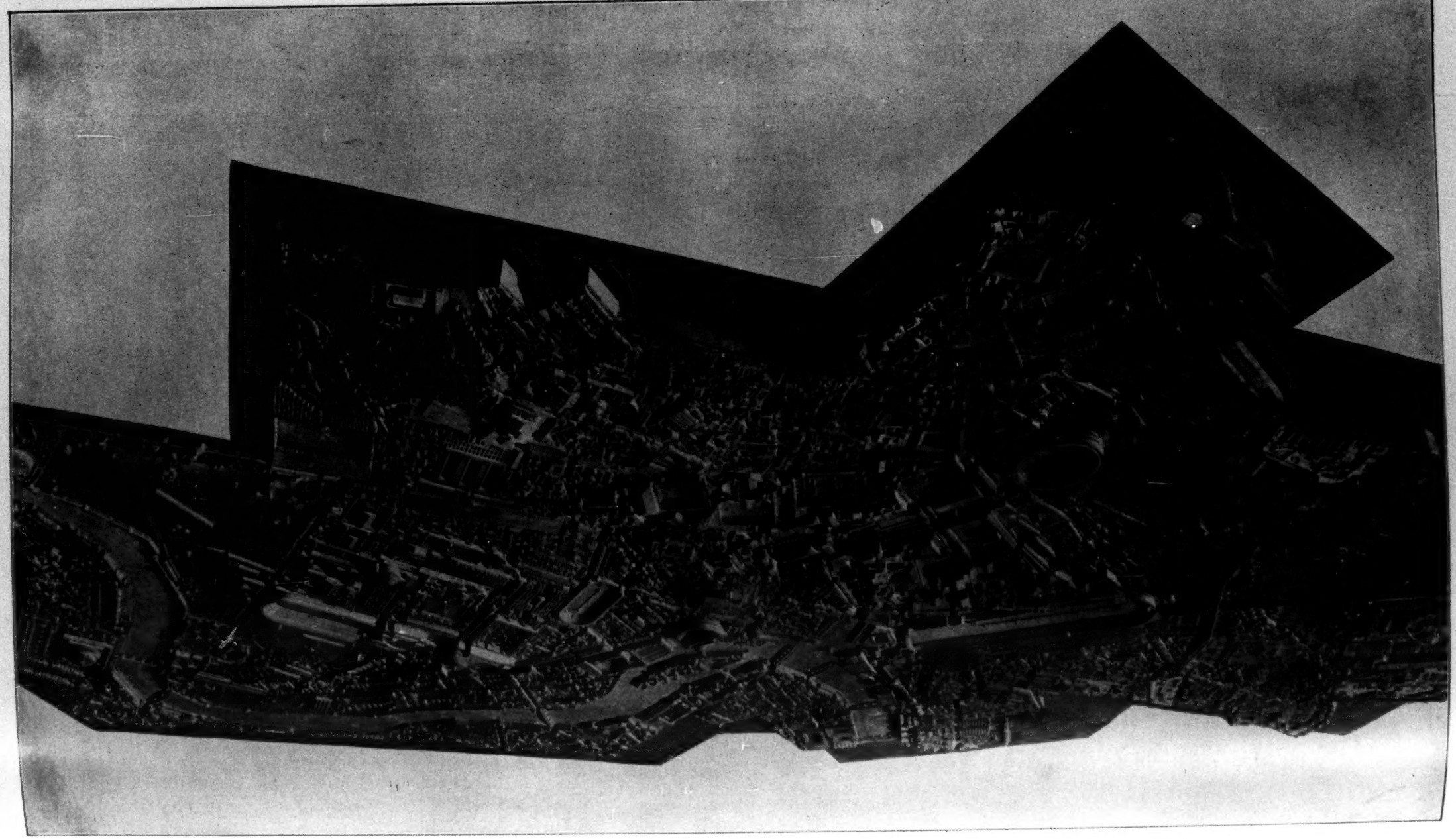
ND FORESTS FOR THE REBUILDING OF OXFORD CIRCUS, WHEN THE PRESENT CROWN LEASES FALL IN.

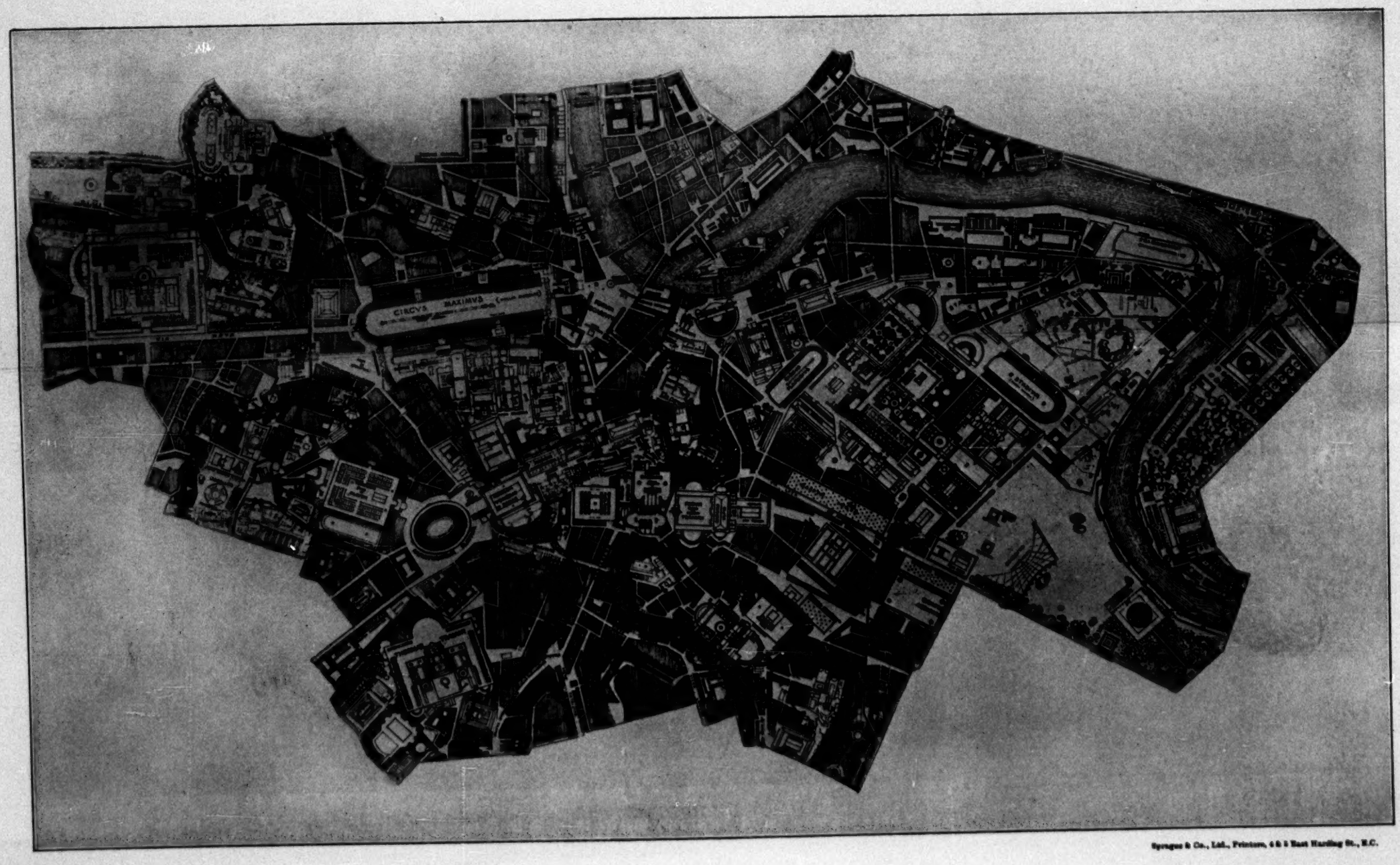
JAYS LIMD., S.W. CORNER.—MR. HENRY TANNER, F.R.I.B.A., ARCHITECT.





BIRD'S-EYE VIEW OF NEW GARDENS, MELLERSTAIN, N.B.—Professor Reginald Blomfield, A.R.A., Architect.





Sprague & Co., Ltd., Printers, 4 & 5 East Harding St., E.C.

MODEL AND PLAN OF ANCIENT ROME.—By Monsieur P. Bigot.

AI

A GE
Rome, has
(p. 618, M
exhibits
portance
special tr
did recon
exhibited
Bigot and
the Villa
several y
the prep
Rome on
of Profess
dation of
present da
best arch
has condu
points of
and natu
Maximus,
which oc
the arch
can alwa
not the
criticism
considera
touched
The ill
Bigot's
bird's-ey
north-eas
to corres
the city
Pincian,
originate
the Pra
number
culum a
struck a
by publi
etc.), wi
ciated,
city, for
private
outlying
the purvi
survey o

MONTHLY HISTORICAL REVIEW.

The Palace of Diocletian at Spalato: General View of Model from the South.

ARCHÆOLOGICAL RESTORATIONS BY FRENCH ARCHITECTS.

A GENERAL notice of the Archæological Exhibition, which is being held this year in the Baths of Diocletian at Rome, has already appeared in these columns (p. 618, May 19), but there is one class of exhibits of which the excellence and importance is such that they seem to call for special treatment; and these are two splendid reconstructions in the form of models exhibited by two French architects, MM. Bigot and Hébrard, both old students of the Villa Médici. The former has spent several years of persistent, careful work in the preparation of his model of ancient Rome on the scale of 1:400, which is that of Professor Lanciani's great plan, the foundation of the study of ancient Rome at the present day. Not content with following the best archæological authorities available, he has conducted independent investigations into points of detail, *e.g.*, as to the exact location and nature of the carceres of the Circus Maximus, as to the identity of the temple which occupied the elevated platform above the arch of Titus, etc., so that his judgment can always command our respect. This is not the place to enter into a detailed criticism of the model, but a few general considerations may not inappropriately be touched upon.

The illustrations (see plates), due to M. Bigot's courtesy and kindness, give us a bird's-eye view of the model seen from the north-east, and a plan, as yet unpublished, to correspond. The north-east portion of the city, the tableland from which the Pincian, Quirinal, Viminal, and Esquiline originate (including the Baths of Diocletian, the Prætorian Camp, etc., and a large number of public parks), and also the Janiculum and Vatican, are omitted. We are struck at once by the large space occupied by public buildings (temples, baths, circuses, etc.), with which gardens are often associated, even in the central portion of the city, for we must remember that the great private gardens were mainly situated in the outlying districts which are not included in the purview of the model. As is shown in the survey of the growth of Rome given by Dr. Thomas Ashby at the Town Planning Conference last October, almost all the emperors who reigned for more than a very few years increased the number of public buildings, and generally constructed a particular group of them; sometimes they encroached on the Campus Martius, in origin an open flat space by the river on the west of the Via Flaminia (the modern Corso), used as a drill and exercise ground; but often they erected their monumental edifices in more thickly-populated quarters of the city, and this was especially the case with the successive Imperial Fora.

The period chosen is, indeed, thus described by M. Bigot himself in the brief *Notice sur le Relief de Rome Impériale*, which he has prepared for the use of visitors:—"The city is represented at the middle of the IVth century after Christ, the period at which its monumental aspect attained its highest development. The last great buildings constructed are the Basilica of Maxentius, which

The Palace of Diocletian at Spalato: The Mausoleum.
Restoration by M. Ernest Hébrard.

The Palace of Diocletian at Spalato:
View of the Peristyle in its present condition.

was inaugurated by Constantine, and the Baths of Constantine. The Emperor Constans . . . brings from Egypt the greatest of the obelisks, which now adorns the Square of S. John Lateran, and places it in the Circus Maximus, and this is the finishing-touch. The edicts of Constantine have already dealt a mortal blow to Paganism: the temples are shortly to be closed; those which the fire destroys will certainly not be reconstructed. The churches, on the other hand, are rising from the earth [they hardly fall within the extent covered by the model]. The reign of Julian (360) checks for a moment the fall of Paganism and the progress of Christianity. On the eve of the barbarian invasions Rome has never been so fair." The moment of representation is indeed well chosen; the age of Constantine, while it marks a decadence in the execution of details and in the fineness of decoration, witnessed the solution of problems of construction which earlier builders had hardly attempted, and a new style of architecture begins.

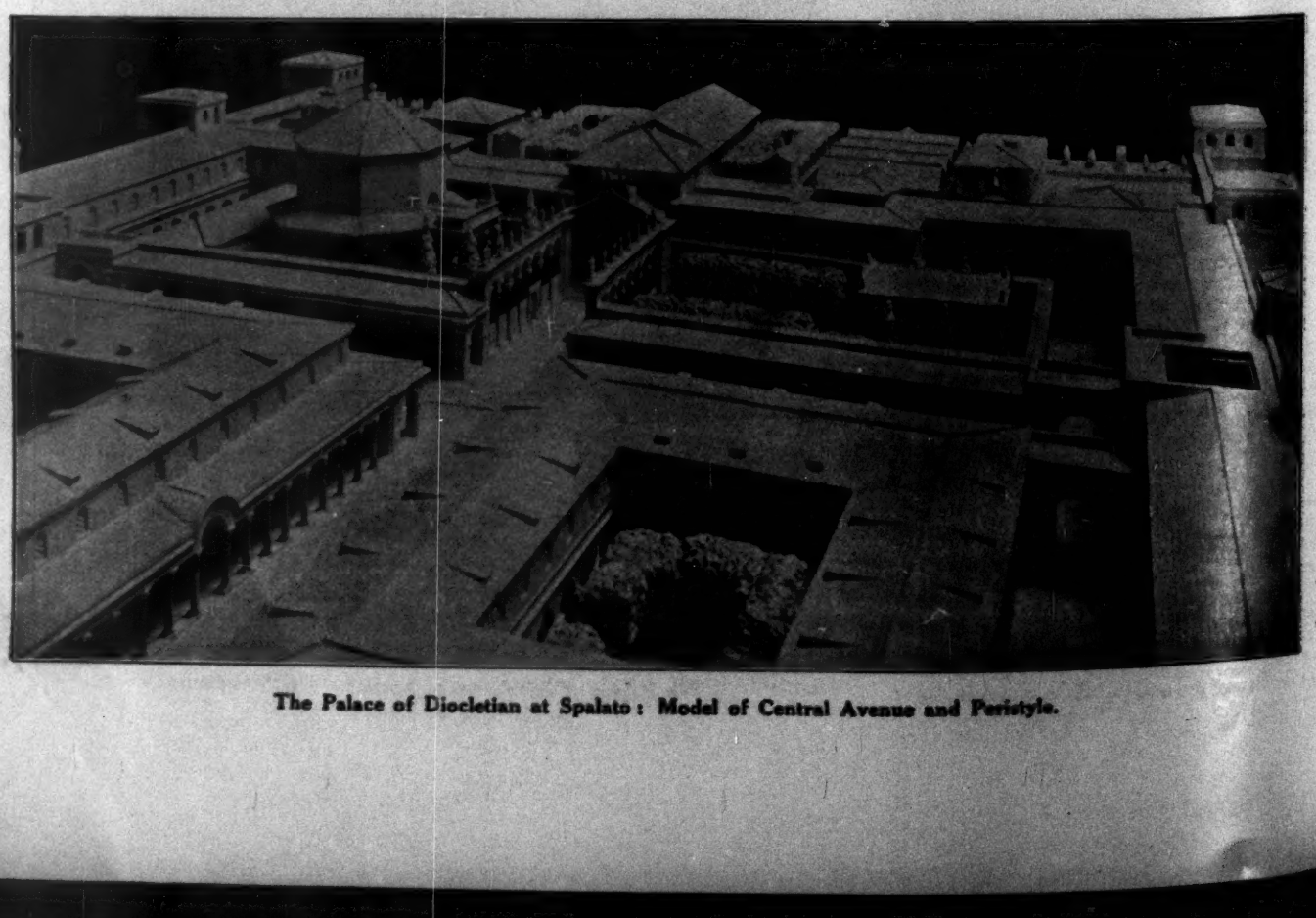
Another point which strikes us at once is the extreme narrowness of the streets. We have to remember that the privilege of driving in a carriage within the city was an exceptional one, conceded to only a very few, and that cart traffic was mainly carried on at night. The richer citizens went about in litters, the poorer on foot, so that wide streets were unnecessary, and we find narrow alleys like those which are seen in seaport towns on the Mediterranean at the present day. But even the main arteries of traffic seem of inconsiderable width to us who are accustomed to modern roads and vehicles; the standard width of a Roman high-road outside the city is only 14 ft., so that those ancient bridges which are still in use on the modern high-roads are narrower than the rest of the road, somewhat paradoxically, inasmuch as they were slightly wider than the rest of the road in ancient times. The Roman vehicles were obviously narrow, with a width of not much over 5 ft., and long narrow carts are still in favour in the Campagna.

But the narrowness of the streets had another object: to give shelter from the sun in summer and from the cold north wind in winter—a fact of which it would seem that the city architects of modern Italy have been entirely oblivious. Modern traffic, and especially motor traffic, demands, it is true, a certain number of broad arteries and open spaces; but it ought to be recognised, at the very outset of the campaign in favour of the better planning of towns, that climatic conditions must be carefully considered, and that in the south a very broad street or a very large square, such as that in front of the new monument to Victor Emmanuel II., may, unless adequately shaded by trees, be a disadvantage rather than otherwise.

The model shows us another case in which the superiority of the judgment of the Roman architects is clear. At the Pons Ælius, at any rate, and at certain other points as well, especially in the vicinity of other bridges, the embanking walls of the Tiber were not, as now, perpendicular, as though to provide only for the river when full, but there were two steps on each side, so that, when the river was high, all the eight arches of the Pons Ælius came into use; when it was at its normal level the three flood arches and the upper step remained dry; while, when it was low, only the three large central arches were employed, but there was always a regular and adequate flow of water between its banks. Nowadays, on the other hand, when the river is low the current is distributed over too wide a bed, and at some points mudbanks are formed; for several years, indeed, owing to the miscalculations of the engineers, the left arm of the river at the island was silted up, and there was serious talk of filling it up and abolishing it.

One or two other points strike our attention: the enormous Circus Maximus, the long lines of the aqueducts crossing the Cælian hill (the more important ones, which came in at the highest level of the Esquiline tableland, are omitted), the walls and towers of Aurelian along the left bank of the Tiber, which have now completely disappeared; but a detailed consideration would take too long. There will no doubt be points upon which M. Bigot's opinions may be challenged and discussed; but the conscientious thoroughness with which the work has been done must always entitle them to respect; and it is most fortunate that it has been possible to include in the exhibition this magnificent reconstruction, the fruit of years of patient labour and of study of the monuments themselves, which for the first time places before our eyes an adequate picture of what we may believe that ancient Rome was. Whatever may be the ultimate destination of the model, it is most earnestly to be hoped that a copy, if not the original, will remain available for study in Rome.

The model is so large that a special hall has been set apart for it; but in the hall devoted to the City of Rome in the exhibition itself there is hung a very fine plan of reconstructed ancient Rome, executed by M. Chedanne, another old student of the Villa



The Palace of Diocletian at Spalato: Model of Central Avenue and Peristyle.

Médici. Turning to the consideration of M. Hébrard's model* and drawings, which are placed close by, we find ourselves in a not very much earlier period. Diocletian's palace at Spalato must have been almost, if not entirely, completed at the moment of his abdication on May 1, 305; and in it we find already the dawn of a new architecture and of a new style of decoration. It has a special interest for us, for our own Robert Adam made it the subject of a monumental work, "Ruins of the Palace of the Emperor Diocletian at Spalato in Dalmatia" (London, 1763), which up till last year held the field as the best attempt at reconstruction available, while his plan, though to some extent vitiated by imaginary additions and adherence to a presupposed but often non-existent symmetry, still holds good in its main outlines even after the researches of the archæologists of the present day. Professor Niemann, of Vienna, has recently published a plan and drawings of what actually exists, with restorations of portions of the palace†; while M. Hébrard has also drawn up a plan, with complete restorations, based upon the most careful study, and excluding hypothesis as far as possible. His drawings, and a model based upon them (executed by the sculptor, R. Matauschek), are exhibited at the Baths of Diocletian; and the drawings, with a text in which M. Jacques Zeiller will co-operate, will be published in the course of the present year. In the meanwhile, M. Zeiller has written a short pamphlet to serve as an explanation to the exhibit (*Le Palais de Diocletien à Spalato*, Paris, 1911), from which, with the kind permission of M. Hébrard, the illustrations are taken.

The building was neither a villa in the ancient, nor a palace in the modern sense of the word, but was a fortified castle, resembling a Roman camp in plan; though M. Zeiller thinks it is not unlikely that the arrangement was directly taken from some such town as Antioch (we may add Aosta and Turin to the comparison, both of which probably owe their origin to camps). It was surrounded by an almost rectangular enceinte, with square towers at the angles; in the centre of each side, except the side towards the sea, the south-west, was a gate flanked by hexagonal towers, and there were other intermediate square towers, one in each curtain between the gate and the angle tower. On the south-west side there was a covered portico, adorned by engaged columns, above which there was probably a terrace garden. The only exit on this side was a low postern in the centre, leading out to a small landing-place, and communicating with a narrow passage under the *tablinum* and the vestibule. In the centre two streets intersected, roughly at right angles, leaving two blocks of buildings in the north-eastern half of the enclosure, themselves surrounded by a walk which led round the external walls, the space immediately adjacent to the latter being no doubt used for store-rooms. These two blocks were probably occupied, the one by the imperial guard, the other by the servants' quarters, stables, etc.

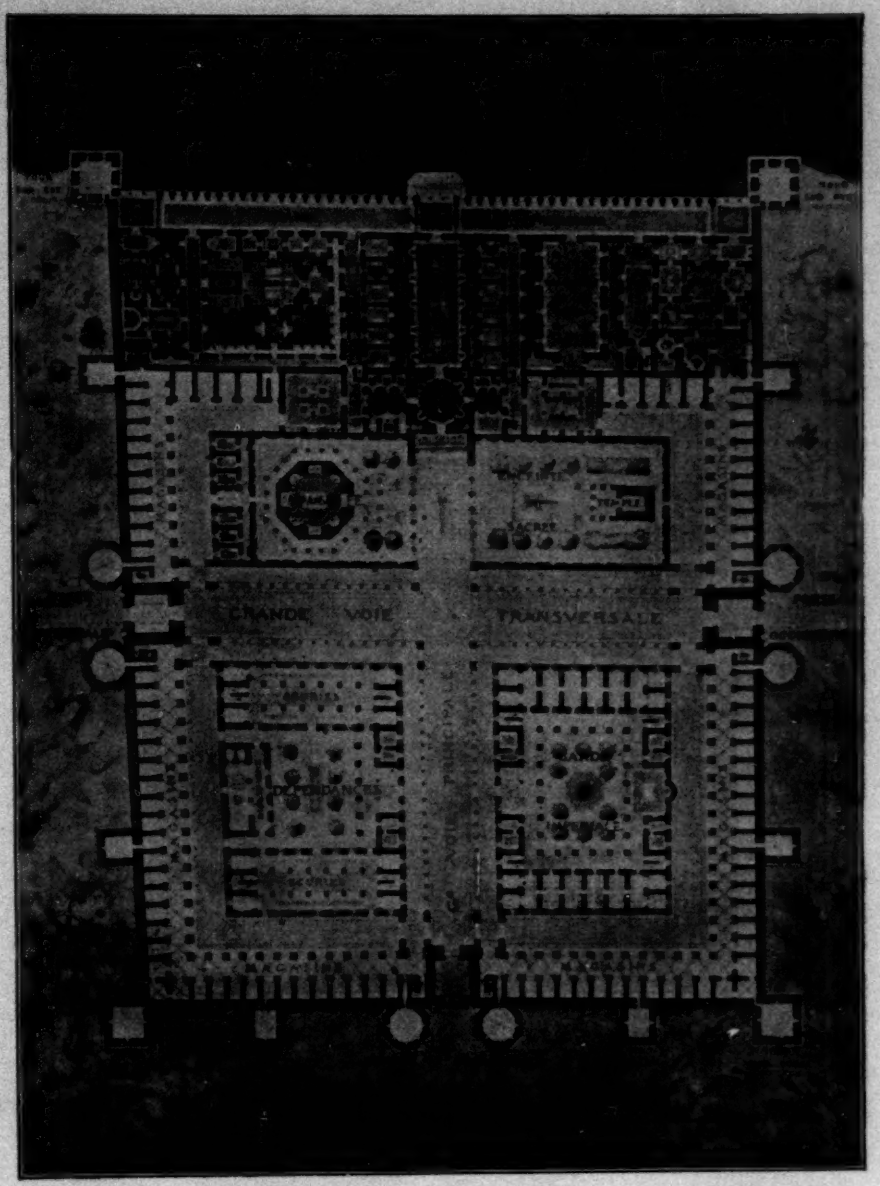
In the south-eastern half, however, the main street did not run on, but at once entered a peristyle, on the right of which was a sacred enclosure with a temple (now the Baptistery of the Cathedral), and on the left a mausoleum (now the Cathedral). See accompanying plan. Straight on was a circular vestibule, leading to the palace proper; on each side a passage opened to the domestic quarters, while going straight on the chief reception-room, the *tablinum*, was reached.

Here very little remains above ground, but a careful study and investigation of the substructions, which are far better preserved, has enabled M. Hébrard to form a very fair idea of the original disposition of the palace; and, though the names he has assigned to the individual rooms are not in all cases absolutely certain, they may be regarded as at least highly probable.

On each side of the *tablinum* is a group of six small rooms, deriving their light from a narrow court which separates them from it. These, on the analogy of a similar group of rooms at Hadrian's Villa, M. Hébrard supposes to be guest-chambers. Beyond them, on the north-west, is a large apsidal hall, probably the library or museum, running from north-east to south-west; it was not accessible directly from the *tablinum*, but only by means of the long covered promenade which, on the side of the sea (the south-west), replaced the strong walls and towers of the other three sides. Further on, again, is another smaller hall with an exedra, and then come the private apartments of the Emperor and the baths.

On the south-east the arrangement is not symmetrical, as Adam had supposed, but quite different. The principal hall on this side is cruciform, with its axis running parallel to that of the south-western façade, and an apse at the north-west, and the rooms surrounding it differ in plan from those on the other side; and beyond it, at the south-east extremity, is a self-contained group of rooms, which probably formed the women's quarters.

The Palace of Diocletian contains many remarkable innovations in architecture, such as the use of the arch resting directly on a column in the peristyle, the transformation, in the middle of the south-west façade, of a horizontal architrave into a semicircular archivolt, etc.—though M. Zeiller is wrong (p. 50) in claiming that it offers the first example of the use of mosaic in the decoration of a dome: we may cite, as an example to the contrary, a nymphæum in the Roman Campagna, near the Via Tiburtina, described by Dr. Ashby in "Papers of the British School at Rome," Vol. III., p. 104. We shall therefore, welcome the forthcoming publication of MM. Hébrard and Zeiller's great work; and we may congratulate the French architectural students of the Villa Médici upon the splendid restorations that two of their number have been able to produce as a result of their studies there, with the hope that British students will one day demonstrate that they are capable of work of a similar character.



The Palace of Diocletian.
Restoration by M. Ernest Hébrard.

* It was actually executed by MM. Germain and Chatillon from M. Hébrard's drawings, on the scale of 1 : 1,000.

† *Der Palast Diokletians in Spalato*, Vienna, 1910.

THE ROMAN FORUM.

IN the *Times* of September 5 and 6 appeared two articles giving an exceedingly interesting *résumé* of twelve years' work of excavation in the "Foro Romano," based on the report now in preparation by Commendatore Boni in view of the International Archæological Congress to be held in Rome in 1912. Few spots on the surface of the Old World have been the scene for so long a period of an intense and constantly varying political and social life, and, consequently, subject to such frequent alterations in aspect, as these few acres of valley bottom. The greatest caution and experience is thus necessarily required in the work of exploration so as to obtain the maximum of information from the numerous strata of construction laid bare by the pick and shovel, and conclusions based on partial excavation have constantly to be revised in view of more exhaustive search.

It is therefore of great value to have this authoritative stocktaking, often a period of scientific investigation prosecuted with great activity and peculiarly rich in results.

The topics discussed resolve themselves into six heads. The first is the primitive cemetery near the Cloaca Maxima, containing examples of various types of early burial, and so old that it was a surprise to contemporaries even as early as Republican times when a portion of it was discovered in one of the rebuildings of the great sewer. The second is the identification by Commendatore Boni of the remains of masonry, consisting of great blocks of square tufa, intersected by the foundations of the Arch of Titus, with the Temple of Jupiter Stator, and of other foundations hard by with those of the Chapel of the Public Lares, the powers which stood in the same relation to the Commonwealth as the Lares Familiares to the family, representing as they did the reserve of the latent energy of the Roman people.

The third is provided by the massive concrete substructure of fortifications, traceable from the House of the Vestals to beyond the Arch of Titus, indicating the existence of two parallel walls with external towers, probably built by Aurelius in the IIIrd century. This work involved the destruction of aristocratic mansions of the Ist, in one of which a mosaic floor and basement with cubicles for slaves opening out of a central corridor have been identified.

A longer portion of the discussion is devoted to the "Tribunal of Trajan," which Commendatore Boni sees in certain remains found in the centre of the Forum on the same site as those of the base of the colossal statue of Domitian. Among these are two reliefs commemorating the proclamation by Trajan of largesse to the people, which are of great importance from the topographical point of view, for the Emperor is represented as standing in the Forum, and if an agreement can be arrived at as to their interpretation the exact position of many of the surrounding buildings will be determined beyond question. No such agreement is, however, yet established among archæologists.

Of more archæological than architectural import is the passage in Commendatore Boni's report in which he deals with the origin of the famour Niger Lapis, which he believes to have been placed as a propitiation after the discords and bloodshed which occurred at the time of the Gracchi on the site of an old destroyed shrine. This had been carefully filled in with river gravel mixed with sacrificial ash and votive offerings before being covered by the black slab marking a *locus religiosus*, a spot of mourning and ill-omen.

Architecturally, the most interesting passage describes the work done at the Basilica Æmilia, which, thanks to the removal of a group of houses, it has been possible to explore—sufficiently, at least, to make it clear that this magnificent structure fell in a single day, as the result, probably, of an earthquake. The tangled mass of material accumulated on the floor is far too bulky to be removed except by slow degrees, but the main lines of the building can now be reconstructed with tolerable certainty from what is uncovered, in the light of the drawings made at the Renaissance of the portions of the façade then still standing. In front of the portico ran a line of fourteen *tabernæ*, richly decorated with marbles, corresponding with the bays of the portico behind, and forming a projecting ground story parallel with the Sacra Via. This was the only portion restored in the VIth century after the disaster. The rest was abandoned in despair, but utilised as a quarry first for the decoration of the new Rome on the Bosphorus, and later of the newer Rome of the Renaissance. It appears to have been "divided into three naves by two lines of very large columns of African breccia surmounted by Corinthian capitals. These columns supported richly-carved crossbeams, above which rose another line of slighter columns, which in their turn supported the cornice and coffered ceiling. With the exception of a very few broken shafts of columns, still standing on white marble bases, everything lies buried in inextricable confusion. Here and there can be seen the foliage of capitals, pieces of most delicate tracery, and the mouldings of bases, architraves, and cornices. But for the most part the mass of ruins seems jumbled beyond all hope of disentanglement—the delicately cut acanthus of white marble capitals lies next to a shaft of cipollino, flaking off like leaves from a book, or a great column of breccia, disintegrating into its component parts; and all these are mixed up with the crumbling blocks of the tufa walls." The old pavement was formed of "great squares of Chian and Numidian marble bordered with bands of cipollino."

The *Times* articles close with a well-deserved tribute to Commendatore Boni, not only as a learned and imaginative archæologist, but as an excellent and withal tasteful curator, "for the Forum is really beautiful, thanks to the skill with which vegetation has been used to hide the scars of excavation, the *débris* of the least important remains, and, above all, the modern work of necessary restoration."

HISTORICAL NOTES.

An Architect-Painter. One of the water-colours in the South Kensington Museum is "The River Orwell, and the Bridge near Ipswich," by James Harrison, who "exhibited landscapes at the Royal Academy, 1827-46." Mr. Ralph Thomas, in *Notes and Queries* for September 9, identifies the artist as one who began life as a painter but found his living in architecture; one of his semi-successes being a design for the City of London Schools," which the Committee awarded the third premium."

Monumental Brasses. One of the most interesting features of the Ancient Art Section at the Earl's Court Exhibition is that devoted to the monumental brasses arranged by Mr. Walter E. Gawthorp, F.S.A. (Scot.). There are to be seen also rubbings of various periods and styles, including one after the XIVth century brass to Abbot Delamere at St. Albans, which is of Flemish workmanship. By the way, the Archdeacon of Oldham dedicated a few weeks ago, in Islip Church, Northants, the brass reproduced on this page, in memory of John and Anne Nicoll. It was designed by Mr. T. G. Gawthorp, and engraved in the workshops of Messrs. Gawthorp & Sons, who are now engaged on the restoration of some brasses at Magdalen College, Oxford.

Brass in Islip Church, Northants.
Designed by Mr. T. G. Gawthorp.

An Abandoned City. If any site might have been deemed immune from the vulgarity of advertisement it would be that strange relic of the past, the abandoned city of Les Baux, slowly expiring on the arid rocks of Provence. But no; one of the most prominent portions of this rocky eyrie has recently been cut to a smooth face and whitened to receive a colossal advertisement. Les Baux is one of the curiosities of Europe. In the Middle Ages it was a flourishing city, ruled by a line of warlike barons, who claimed the kingdom of Arles and the county of Provence, and from whom the Houses of Orange and of Monaco are actually descended. The failure of water, the inaccessibility of the situation, and the general increase in security, rendering such a lofty perch unnecessary, have gradually reduced the population to some 400, a tenth of its former size. But the great castle and many of the buildings stand. Among them are many of Gothic and Renaissance times. The latter include a graceful little Protestant chapel, the only example left in all France of a Huguenot place of worship. But what renders Les Baux unique in Europe, though paralleled in Arabia and India, is the fact that many of its ancient buildings and notably large portions of the castle are hewn out of the solid rock, and are, in fact, monoliths.

A City Church. The Wren Church of St. Andrew-by-the-Wardrobe, where restorations have been in progress, will be re-opened on the 22nd inst. In the parish magazine the Rector writes:—

"For the first time I am able to see the beauty of the richly-carved roof and its various designs. Right down from east to west the centre of the slightly domed roof is broken by large circles of deeply-carved flowers and fruit, rivalling in beauty and richness of design the woodwork of Grinling Gibbons himself. A small triangular design surmounts every column which rises from the galleries to the ceiling, and a different design fills each triangle, though they consist in each case of cherubs' heads surmounting designs of fruit or flowers. But those which strike one most are the carvings over the centre of each arch. The same designs for these are on both sides of the church. Let me begin at the west end, where keeping watch over the organ is an eagle with outspread wings standing on the open Book. The second design consists of two cherubs holding a large crown over some flowers; the third, cherubs sitting on clouds; the fourth is that of cherubs without wings, with a design of rushes entwined round them, while the fifth design, over the altar, is of a large white dove with outspread wings with a branch of olive leaves coming out of either side of its mouth."

The Penalty of Jerry Building. The collapse of a wall and roof of a winter garden and lounge, which were being added to the Eldorado Music Hall at Nice, on Friday last, has resulted in several people being killed. It is thought that the work, which was being carried out in reinforced concrete, had not been given sufficient time to set before the internal fitting had been commenced.

The loss of life through the collapse of a structure, though not a criminal offence, reminds one of the early days when such was the case. De Morgan, when making excavations at the tell or mound at the Acropolis at Susa, unearthed a large block of black diorite, on which were engraved the Laws of Hammurabi, who lived about 2200 B.C.

This code, which gives the Laws of Babylon at that time, was engraved upon the column in forty-nine long columns with introductory and concluding texts. Forty-four columns are still intact. Amongst others the laws governing building are given, and provided that the responsibility of unsound workmanship rested with the builder. If the builder erected a house which fell down and killed the owner the builder had to pay the penalty with his life. If one or more of the owner's slaves were killed, the builder had to replace slave for slave, and if the owner's son were killed, the builder's own son was put to death. One wonders what happened when the builder had no son! The builder had also to pay compensation for damage to the property or utensils of the owner, and, further, had to rebuild the parts that had fallen down.

The Roman Amphitheatre of Lutetia.

FEW of the tourists who visit Paris are aware that, like Arles and Nîmes, it possesses its Roman amphitheatre. Excavations made in 1870-3, near the Rue de Navarre, in the squalid quarter bordering on the Rue Mouffetard, with its age-long reputation as the resort of cut-throats, pickpockets, *et hoc genus omne*, disclosed the forgotten "Arènes de Lutèce." These were constructed in the IInd or IIIrd century A.D., in close proximity to the summer residence of the Roman Governor, remains of which are to be seen in the garden of the Musée de Cluny. Like it, they were outside the city proper, then confined to the island in the Seine, and occupied a position on the slopes of the hill, later known as Montagne Ste. Geneviève. The ellipse measures some 180 ft. by 150 ft., and the structure, which was less well-preserved than many southern examples, has been extensively restored. After protracted negotiations, repeatedly broken off, the municipality has recently come to terms with the owner of the site, and intends to make the amphitheatre more accessible to the public, after clearing the approaches of obstructing buildings. Whether it is proposed to utilise it for a revival of gladiatorial shows, or for bull fights of the Spanish type, or merely for the comparatively mild cow-fights of Southern France has not yet been revealed.

The York Water-gate.

"THE steps which the London County Council is taking through its Superintending Architect's Department to arrest further decay in the stonework of that interesting relic of Old London, the York Water-gate, have not been taken a moment too soon, for, even as it is, many of the features of the stone-carving have altogether disappeared," says the *Antiquary*. "It was the watchful Society for the Protection of Ancient Buildings, with its headquarters in the neighbouring Buckingham-street, which urged the Council to apply preservatives. The Society supplied the information, at the Council's request, that the best method of resisting the decay of stonework has been found in repeated applications of baryta and lime, with a final coating of ground lias blue lime slaked in boiling water, care being taken to avoid the unpleasant appearance left by the baryta treatment. This has been the means used to prevent further decay of the famous XVIIth-century garden-front of St. John's College, Oxford, work which was finished last year, and the treatment has also been employed with satisfactory results on the tower of West Ham Church and at Godalming Parish Church. It is understood that the water-gate will be treated on similar lines." Whether the cleaning is judicious or not, the immediate effect of the work is not satisfactory. After treatment, the structure has been patched by masons, successors to the Nicholas Stone, who so admirably carried out the intentions of Inigo Jones. The old-time shadows have vanished, and, shorn of its mellow if grimy appearance, the gate has lost some of its fascination.

Medina Azahara, Cordoba.

EARLY last year (writes Mr R. E. Carr, British Vice-Consul) excavations were started by Government on the site of this marvellous Moorish palace and pleasure city, built in the Xth century and razed to the ground shortly after. It is situated between three and four miles from Cordoba, at the foot of the Sierra, and was erected in a series of about four terraces, covering a large extent of ground. In the XVth and XVIth centuries the Hieronymite monks used the ruins as a quarry for the building of their magnificent monastery close by, which is itself now in ruins, and it is believed that a great deal of the marble was burnt by them to make lime. A quantity of interesting arabesques carved in stone, for wall decoration, still in perfect condition, has been unearthed, as well as broken glass and pottery. The excavations are being carefully and intelligently carried out with far too scanty funds. Various descriptions exist of this wonderful place, the site of which has been called by the people "Old Cordoba" from time immemorial, though it was known by the learned to be that of Medina Azahara.

St. Jean, Troyes.

THE old city of Troyes is peculiarly rich in churches of historical and artistic value. Some may be purer in style or more imposing in their proportions, but few present a more varied series of interesting features than St. Jean, whose southern side is seen in the accompanying figure. Its bells rang for the marriage of Charles VI. of France with Isabel of Bavaria, a princess who contributed largely by her selfishness and unpatriotic conduct to the miseries of the Hundred Years' War, and again later for that of her daughter Catharine, who brought as her dower to our Henry V. no less than the crown of France. Troyes was visited by a disastrous conflagration in 1526, which necessitated the rebuilding or restoration of many of its churches, and thus gave free scope for that school of Renaissance church design which flourished with such brilliance in the district. St. Jean,

Belfry, St. Jean, Troyes.

however, which dates principally from the XIIIth and XVth centuries, seems to have been more considerably worked upon some half century later.

Among its curiosities are the replacing of the mediæval tracery in some of its choir windows by Renaissance substitutes simulating a skeleton structure with slender pilasters and pediments, of by no means ungraceful effect, and the picturesque clock turret seen in the foreground of our illustration. The church has recently suffered severe damage by the fall—an event long feared—of the steeple shown in the background. The ancient tower, no longer able to carry the heavy slated timber belfry of a type common in the district, tottered under its load and disburthened itself of it on to a house on the opposite side of the street, on which it rested like an extinguisher, while the bells were deposited in the attics, and a chimney-stack was spitted on the finial.

The Villa of Horace.

EVER since the Renaissance the site of that country villa in the Sabine Hills, which was so dear to the heart of Horace, has been a subject of keen interest and debate among archæologists. It appears that the French School in Rome has at last discovered its remains. The following is a translation of a note on the subject in the current number of *Architecture*:

"The researches made to identify the site of the villa made it possible to place it at Vigna di Corte, in the neighbourhood of Licenza. The excavations carried out in that district have actually resulted in the discovery of sure evidence of the poet's residence there. The finds include fragments of primitive walls and a mosaic pavement of the age of Augustus. The villa occupied the summit of a hill bounded on two sides by the little river Digentia. The dwelling-house was preceded by a garden of considerable size surrounded by arcades. In the centre of the garden a tank, 20 metres long, was found communicating with the river. On the left the imposing remains of a farm are still visible. A *frigidarium*, a large elliptical plunge-bath, and the *calidarium*, have been uncovered. The central building of the villa, containing splendid mosaics, extends as far as the banks of the Digentia. The remains found in the interior lead to the conclusion that it was rich in marbles and mural paintings. A considerable number of fragments of artistic value have been collected."

Unless these splendours were, to any large extent, added by Horace's successors, which is, of course, possible, all this tends to show that his country home was not quite the simple little affair, the unpretentious retreat amid the rusticities of a hill farm, that the genial old Roman poet depicts for us in his verses.

St. Séverin, Paris.

THERE is a half-forgotten corner of Paris on the south bank of the Seine, hard by the stateliness of the Boulevard St. Germain and the gay student life of the "Boul. Mich.," but apart from both, a tangle of tortuous and ancient streets clustering round the Church of St. Séverin. This picturesque district is likely to be dragged from its obscurity and smartened up in conformity with its more up-to-date neighbours by means of a brand-new street driven through its heart. The change hardly seems to be demanded by the necessities of traffic or sanitation, and Paris would lose thereby one more bit of her old-world charm. St. Séverin, which is one of her not very numerous mediæval churches, and has inspired some of Huysmans's poetical pages, has much that is interesting about it. Though it has never been of first-rate importance, its history dates back over a thousand years. It may have been the successor of a chapel attached to the old Palais des Thermes, and certainly existed in the year 700, when it benefited by a large legacy from a certain Ermyntrude, a wealthy lady of Paris. Nothing, however, remains of so early a date, and the present fabric consists of a picturesque amalgam of various periods, grouping picturesquely with the surrounding weather-beaten houses, and it is to be feared that when deprived of their companionship and thrust into the garish day of a modern thoroughfare it will lose much of its meaning.

Three bays of the nave are of the XIIIth century, other portions date from 1347 to 1439, and the choir is of the flamboyant work of the late XVth century. The building was not, even then, at the end of its transformations. In the reign of Louis XIV. that great heiress, "La Grande Mademoiselle," in a fit of piety, bestowed a new decoration upon it. A scheme was drawn up by Le Brun, the decorator of Versailles, for turning its Gothic barbarities into something less glaringly out of fashion. Its pointed arches were disguised in a casing of marble, with ornaments of gilded and painted stucco, and a new altar was provided with a baldacchino reposing on eight marble columns with bronze enrichments, and sculpture by Tuby.

More recently still, in 1840, the portal of the destroyed church of St. Pierre-aux-Bœufs was removed from the precincts of Notre Dame and affixed—much restored, and without rhyme or reason—to the façade, to replace, perhaps, its two famous stone lions which gave rise in the Middle Ages to the legal phrase, "*Datum inter duos leones*," found in monkish judicial documents.

St. Séverin, almost alone among Parisian churches, retains some vestiges of a cloister whose arches, partly built up, partly ruined, surround the Curé's sad little garden, its only rival being the "Cloître des Billettes" in the Marais, now the appurtenance of a Protestant place of worship.

THE BUILDING TRADE.

RECENT WORKMEN'S COMPENSATION CASES.—II.

Dependency.

IT is satisfactory to find that the decision of the Court of Appeal in Keeling *v.* New Monckton Collieries, Ltd., on which we commented adversely (the *Builder*, February 3), has been reversed by the House of Lords. It was a case in which a man had left his wife and children in 1888 and never contributed at all again to their support before he met with his death in 1910, and yet the Court of Appeal had held that as his widow, she was a dependent and could claim compensation from his employers at the time of his death. This finding was based on the presumption of law that a husband is bound to maintain his wife, but the House of Lords have now held that, to render a wife dependent under the Act, this legal presumption does not alone suffice, but must be supported by fact. We commented on the extraordinary burden laid upon employers by the decision of the Court of Appeal, and it is satisfactory to find that the House of Lords should have held it erroneous.

In the case Jobson *v.* Cory & Sons, Ltd., the Court of Appeal have decided a point under the new Act which had received decision under the Act of 1897, in the case Williams *v.* the Vauxhall Colliery Company, Ltd. (the *Builder*, July 6, 1907). A workman, injured by accident, and having been paid compensation, had had the payments terminated in an arbitration by the County Court judge on the ground that he had recovered. He subsequently died, and his dependents claimed compensation. The proceedings terminating the payments, to which the deceased man was a party, were held not to debar the dependents from claiming, as they have an independent right to compensation, although credit must be given for the sum paid to the deceased as compensation. Of course, the death must have been caused by the accident, but in our note to the former case we pointed out the important bearing these decisions have on policies of assurance. In some policies the claim has to be put forward within a limited specified time of the accident, whilst in others payments are only to be continued for a certain period, and then be commuted, after which all liability on the part of the assurer is to cease. In such cases as the above awkward questions may arise between the employer and his insurers.

Incapacity.

The recent case of Cory Brothers, Ltd., *v.* Hughes (current "Law Reports") is a very unsatisfactory decision from the employers' point of view. On January 31, 1906, a collier sustained an injury to his right hand, and was paid 12s. 1d. as compensation until August, 1908. His employers then found him light work at the same or slightly higher wages than he was earning before the accident. He worked at various kinds of light work until April, 1910. The work he was then engaged upon was of a nature that involved no exertion, but to get to the place of work he had to walk up hill, and, owing to a diseased heart, he was unable to do this, and ceased working, and obtained registration of the verbal agreement made in February, 1906, under which he was originally paid compensation. The employers then applied for a termination of the weekly payments from the time he had ceased working. It was proved that the heart disease had no connexion with the accident, but yet the County Court judge, whilst accepting this as a fact, awarded 10s. compensation as from the date the man had ceased work. The Court of Appeal approved this finding, holding the man to be suffering from incapacity, the result of the accident, and that it lay upon the employers to prove that that incapacity had ceased. The decision appears, however, to have the effect of imposing upon employers a liability for disease if once a man has been injured. Here the man, after the injury to his hand, seems to have had left him some earning capacity; for nearly two years he had earned something at light work, quite apart from the consideration as to whether the wages actually paid him—which were the same as he had received before the accident—represented exactly his true earning capacity. Heart disease further impaired this remaining earning capacity, but the employers are held liable in nearly the same amount as when the man had no disease. It is little to be wondered at that employers are every day becoming more chary of employing men not in the finest condition of age and health.

Serious and Wilful Misconduct.

Under the new Act of 1906, as we have frequently pointed out, serious and wilful misconduct on the part of a workman affords no defence to the employer where an accident results in death or serious and permanent disablement.

This extraordinary provision gives rise to questions of extreme complication, as it now becomes necessary to determine whether the act of serious and wilful misconduct takes the man out of the sphere of his employment or whether the misconduct has merely taken place within the scope of the employment. An employer giving strict orders where and how a man shall do his work might reasonably believe that when a man acts in contravention of his orders that man would be outside the scope of the employment and outside the ambit of the Workmen's Compensation Act, but two decisions in the current "Law Reports" will serve to show that the law is not so simple.

In the case of Harding *v.* Bryndda Colliery Company, Ltd., a collier was employed in a "bogey," a passage above a "top hole," or working, to cut a hole from the "bogey" into the "top hole" to allow gas to escape from the latter. In accordance with rules made under the Coal Mines Regulation Act, 1887, the working, or "top hole," had been blocked up with boards, and it was understood that any man was forbidden to enter a working so blocked. In the course of drilling the hole from the "bogey" the man asked the foreman's leave to enter the working from below, and leave was refused. Nevertheless, the man, who wished to ascertain whether the hole was being drilled in the right direction, entered the lower working and was asphyxiated. The Court of Appeal, by a majority, held that the man's dependents were entitled to compensation, as, though he was guilty of serious and wilful misconduct, he was acting within the scope of his employment. This finding appears to be based upon the fact that when he met with his death the man was engaged in doing the particular operation he was employed to do, although doing it in a manner prohibited by his employers, and the two Lords Justices distinguished this case from that of Weigall *v.* South Hatton Coal Company, Ltd., where a collier went to a place different from that to which he was ordered and hewed coal there, and was held outside the course of his employment. Lord Justice Buckley differed, and found the two cases indistinguishable, and we regret that his view did not prevail. What can be more disastrous to the safety of workmen than to prove to employers that regulations made and enforced for the men's own security can be disregarded and compensation nevertheless be obtained? If an employer instructs a man to do an operation in a particular manner, and the man persists in taking another course, should he not be held just as much outside the course of his employment as if he was doing some totally different operation? The only common-sense answer to this proposition appears to be in the affirmative. For other cases on this thorny question we may refer our readers to Brice *v.* Edward Lloyd, Ltd. (the *Builder*, July 31, 1909), Pope *v.* Hills' Plymouth Company, Ltd. (the *Builder*, July 9, 1910), and Barnes *v.* Nunnery Colliery Company (the *Builder*, February 3, 1911). The above were all cases where there was a deviation on the part of the workmen from their duty apart from the performance of the particular job in hand, but in Hopgood *v.* Olive Partington, Ltd. (the *Builder*, July 9, 1910), will be found a decision on the same lines as Harding's case, where, in performance of the job in hand, a man disobeyed regulations.

Reference to Medical Referee.

The last case we need refer to is Carolan *v.* Harrington & Co. (current "Law Reports"). Paragraph 15 of the second schedule to the Act states that "any committee, arbitrator, or judge may, subject to regulations made by the Secretary of State and the Treasury, submit to a medical referee for report any matter which seems material to any question arising in the arbitration." The regulations all contemplate a personal examination of the man by the referee, but in a case where the man had died the County Court judge submitted conflicting medical evidence on the question whether death was due to the accident to the referee, and the Court of Appeal have held that he had power to do so.

THE TRADE UNION CONGRESS.

THE Trade Union Congress was opened at Newcastle on September 4, and continued its sittings throughout the week. The delegates numbered 521, as compared with 505 last year, and the membership was stated to be 1,662,123, an increase of 14,418, despite the withdrawal of the Amalgamated Society of Carpenters and Joiners. In 1909 the membership was 1,701,000, and in 1908 1,776,000.

A novel feature was the attendance of a representative on behalf of the Home Office, Mr. Shackleton, and the Board of Trade was represented by three officials instead of only one.

Those persons who anticipated unusually interesting debates on the labour problems of the day at this Congress will certainly have been disappointed, and a criticism of some of the statements relating to the railway strike is rendered impossible out of respect to the Commission of Inquiry now sitting, for certain aspects of trade unionism in connexion with what strike may be said to be *sub judice*, and at present any comment would be unbefitting.

One point, having regard to the many serious strikes that have occurred during the past twelve months since the last Congress, must, however, have struck anyone reading the report of the proceedings, and that is the absence of any official and emphatic disclaimer of the many acts of violence and intimidation that have accompanied these strikes. During the currency of such strikes, and especially when acts of aggression and violence call for civil or military intervention, it is the custom for labour leaders to hasten to assure the public that the trade union workers take no part in *sabotage*, and that they are, in fact, rather the victims of hooligans, who intervene and prejudice the movement. If this be the case, it would appear that the Trade Union Congress afforded the very best opportunity for a united public protest on the part of trade unionists against this wanton destruction of property, yet any such expression of opinion is absent from the presidential address as reported, and the public are entitled to draw the inference that, even if the trade union members do not actually participate in these recurrent acts of violence, they, at least, have not taken the opportunity of deprecating them as furthering their ends.

One other point arises in connexion with the presidential address, in which the President, Mr. W. Mullin, spoke of the supreme folly of any body of employers declining to recognise the unions. Here, again, the President appears to have purposely shut his eyes to facts only too apparent to the public. One of the chief arguments for the recognition by employers of the trade unions is that the unions favour collective bargaining by providing responsible leaders with whom the employers can treat. Yet what has been the history of many of the strikes of the past two years? The so-called leaders have been repudiated by the men; agreements approved

by the leaders have been rejected by the men; and the leaders have been powerless either to influence the men or to restrain them within legal limits. It is also noteworthy that no explanation was offered of the fact that the one railway company which recognised the unions, far from having found its path smoothed, had encountered more unrest and difficulty than any other company.

Again, the intolerance expressed by the President of minorities and the recognition of the rights of minorities by any government cannot be overlooked. Mr. Mullin is reported as having described the conscience of the minority as "the selfish spirit of the minority," and it is only becoming too apparent that the trade unions not only desire to coerce minorities, but that the leaders often break the rules of the societies and take action before ascertaining the existence of majorities or minorities amongst the members.

The present labour unrest is largely a movement on the part of the trade unions to obtain recognition. This being the case, it behoves the trade union leaders first to set their own house in order—to disown the hooligan element, to obtain control over their own members, to abide by their own constitutions, and to accept responsibility for their acts. With so much to be done in these respects revolutionary speeches at the Congress are not only to be deprecated, but they serve to damage the trade union cause in the public eye.

The presence of representatives from the Board of Trade and the Home Office at the Congress was made the subject of rather angry debate. Having regard to the character of some of the speeches delivered during the Congress, the presence of Government representatives at such meetings seems somewhat anomalous.

The actual business of the Congress is rather shortly reported. The complete reversal of the Osborne judgment was called for, and the usual motion for nationalisation of railways was carried, the action of the Government in connexion with the railway strike being used as an argument in favour of the motion.

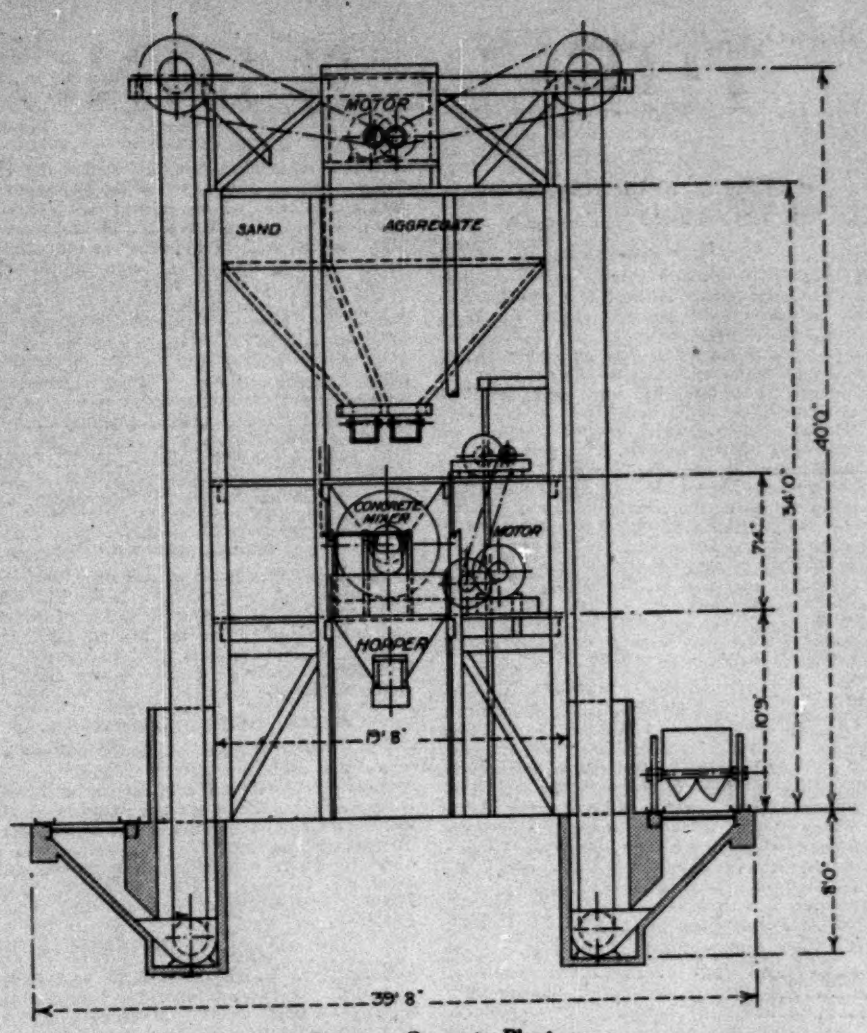
The attitude of the Congress towards the Insurance Bill was somewhat curious. In the first place, a resolution that the insurance scheme should be non-contributory was defeated on a card vote by 940,000 to 825,000 votes. But a resolution that the burden of insuring workers whose wages are less than 15s. should be placed upon the employer and the State was carried on a card vote of 530,000 to 408,000. Then Mr. Clynes moved an "omnibus" resolution dealing with several questions, such as withholding benefit from persons in receipt of compensation, the establishment of a tribunal to adjudicate on the conduct of medical men, but which concluded, "The Congress declares that State assistance should be given according to the necessities of industrious people, and therefore claims that persons with wages below 25s. should be called upon to contribute less than higher-paid men, or be relieved of all payments to the scheme." This resolution was carried entire by a show of hands. Thus, in the course of half a day the Congress appears to have advanced from receiving the Bill on a contributory basis to exempting a very large class from their full contribution or any contribution at all. Mr. Roberts, who opposed the resolution, is reported to have enunciated the extraordinary contention that the Workmen's Compensation Act should be amended so as to give injured workmen full wages instead of half wages. The labour leaders seem very slow in appreciating the disadvantages which the present Compensation Act brings to workers who are not in the prime of life and vigour, and although they have a keen eye for the dangers of malingering where the unions or friendly societies are concerned, they soon allow this principle to be lost sight of when the burden is to be imposed on other shoulders.

A resolution condemning the method of patronage in connexion with labour exchanges, as well as the working of the exchanges, was lost, but it is stated that some miners' delegates had unintentionally voted against the resolution.

Mr. Crooks's action in introducing a Bill dealing with labour disputes, some of the provisions of which we dealt with last week, was censured by the Congress and the Bill itself disapproved.

By the suspension of the standing orders a special resolution was moved and carried congratulating the transport workers and the women's trade unions on the successes they had achieved. Mr. Roberts, the seconder of this resolution, did deprecate any disorder and excesses that might have been committed, but from the debates it is apparent that the general strike is to be the favourite weapon in the hands of the trade unions in the future to the detriment of that far wiser and more worthy method if settling disputes—conciliation. Of late years we have watched with approval the extension of the principle of conciliation, and much has been effected by its adoption, and a better feeling has thereby been cultivated between employers and employed, and it will be a national misfortune if the disastrous strikes of the last twelve months displace the more creditable methods of arriving at settlements in trade disputes. Whatever the immediate results of any particular strike may appear to be, it has to be remembered that they involve a dislocation of trade with evil effects, which in many cases are permanent. The country involved in strikes is losing trade daily to her foreign competitors, and, to quote the ancient fable, the disputants in the end are left quarrelling over the two shells of the oyster, whilst the oyster itself, the trade of the country and the profits from which wages eventually have to be paid, has passed into other hands.

The trade unions have useful functions to perform, and, as we have always admitted, perform certain of these functions well; under the Insurance Bill their administrative capacity will further be called into the public service, and it will be a matter for regret if ever they convert themselves into purely militant political societies. We have before observed that the debates at these Congresses hardly do the trade unions justice, and that, as at present conducted, they are detrimental rather than otherwise to the cause of trade unionism. On the present occasion, for instance, a serious debate on the Insurance Bill, and especially on that portion of it which relates to unemployment benefit, might have proved of considerable value and a welcome substitute for the discursive utterances on all kinds of questions which have characterised the proceedings at this Congress.



Compact Concrete Plant.

A COMPACT CONCRETE MIXING INSTALLATION.

THE plant illustrated on this page was specially designed for use in the construction of a building in a busy street and where storage accommodation could not be provided in the customary way. The object of the arrangement was to enable the contractors to prepare concrete rapidly and economically, at the same time guarding against delays due to lack of materials and against inconvenience from excessive quantities of materials.

As may be seen by the sketch, the plant consists of a framed structure including two construction towers, one for hoisting sand and the other for hoisting aggregate. In the middle, a bunker divided into two compartments, each with a discharge valve at the bottom of the hopper, receives the sand and aggregate, and delivers these into the concrete mixer below, which in turn discharges its load into a hopper, feeding trucks for distribution of concrete to different parts of the site. The storage capacity of the sand bunker is 25 cubic yds., and that of the aggregate bunker 50 cubic yds. The hoists and mixer are operated by electric motors.

Sand and aggregate are delivered by waggons with bottom discharge into the shoots shown, and at the foot of these they are raised by the two bucket elevators and discharged through shoots into the bunkers. The hopper below the mixer has the capacity of 4 cubic yds., thus providing a small reserve of ready-mixed concrete. Each elevator has the capacity of 85 cubic yds. per hour.

The arrangement is one of a type which may be found useful by builders having occasion to undertake reinforced concrete construction in cities and large towns.

"PEACEFUL PICKETING."

The council of the Builders' Merchants' Alliance (Limited), after considering several cases of picketing, have agreed that the following resolution be sent to the Home Secretary:—"That the attention of the Government be called to the violence and disorder occasioned during the recent strikes by the intimidation of willing workers under the guise of peaceful picketing."

GENERAL BUILDING NEWS.

CHURCH, PLYMOUTH.

The Bishop of Exeter recently laid the foundation-stone of a new church at Cattledown, Plymouth. The church is being built by Messrs. W. Cowlin & Sons, of Bristol, from a design by Sir C. A. Nicholson, of Messrs. Nicholson & Corlette, London.

SECONDARY SCHOOL FOR GIRLS, DARLINGTON.

The new secondary school for girls, erected by the Durham County Council in Cleveland-avenue, Darlington, is now completed. The front elevation is of red brick, with freestone facings, and the interior of the building is heated with pipes from a large boiler in the basement, while the lighting is done by electricity. The building has been designed by Mr. W. Rushworth, F.R.I.B.A., the County Education architect, who has also supervised the erection of the school. The general contractors were Messrs. R. Blackett; the heating engineers, Messrs. W. Richardson & Co.; and the interior furnishing has been carried out by the North of England School Furnishing Company. Messrs. Cox-Walker put in the electric-light fittings. Messrs. H. W. Bulmer, of Durham, and Mr. J. Chatterton, of Gateshead, were the clerks of works. The cost of the buildings, including electric lighting, heating, ventilating, tar paving, and the laying out of the grounds, was 11,862*l.*

COUNTY SCHOOLS, ECCLESTON.

New County Council schools for the village of Eccleston, near St. Helens, have been opened. The schools, which have accommodation for 100 boys and girls, have been built from plans by Mr. Littler, county architect, at a cost of 2,060*l.*, consist of three class-rooms, marching space, entrance halls, cloak-rooms, and teachers' offices, all on the ground floor. The building is one story high, faced externally with Ravenhead rusticated brick. The work has been carried out by Messrs. Jno. Rothwell & Sons, contractors, St. Helens.

NEW SCHOOLS, SUTTON VALENCE.

In the latter half of the XVIth century, William Lambe, citizen and Clothworker (who built the water-conduit near Holborn), founded a grammar school at Sutton Valence, Kent, which he placed under the conduct of the Clothworkers' Company. The Company continued the management of the school until about a year ago, when they transferred it to the United Westminster Schools, for purposes of the Emmanuel School, and agreed to contribute towards the cost of rebuilding the premises. The new buildings, erected by Messrs. Wallis & Sons, Ltd., of Maidstone, at an outlay of 30,000*l.*, after plans and designs by Mr. H. Percy Adams, were opened two or three weeks ago by the Archbishop of Canterbury.

HIGHER GRADE SCHOOL, LEVEN.

This school has been reconstructed from the plans prepared by Messrs. Haxton & Walker, architects, of Leven, and the additions include a central hall, suite of modern class-rooms, laboratory, and art-room. The work was carried out by the following contractors:—Masons, Messrs. W. Black & Son, Kirkcaldy; joiner, Mr. L. Swinton, Leven; plumbers, Messrs. Mills & M'Donald, Edinburgh; plasterers, Messrs. C. Neaves & Son; slater, Mr. T. Black, St. Andrews; glazier, Mr. W. H. Carron, Kirkcaldy; tile work, Messrs. Allan & Son, Edinburgh; electrical work, Mr. O. Melville, Kirkcaldy; steel work, Mr. D. Haig, Kirkcaldy; heating, Messrs. James Combe & Son, Glasgow; painting, Messrs. J. C. Rolland & Son, Leven.

NEW SCHOOLS, STANWAY.

These schools have been erected at a cost of about 3,394*l.*, from plans prepared by Mr. J. W. Start, F.S.I., architect, of Colchester. The work was carried out by Mr. Charles Deaves, contractor, of Bures, and the schools were opened last week.

NEW SCHOOL, UPPERMILL.

The plans for these buildings have been prepared by the county architect, Mr. Graham, and the estimated cost of the whole work is about 4,500*l.* The accommodation provides for about 250 scholars.

NEW SCHOOLS, DUFFRYN, EBBW VALE.

The estimated cost of erection of these schools is about 15,000*l.*, and the plans were prepared by Mr. Henry Waters, M.S.A., architect, of Ebbw Vale. The bills of quantities were taken out by Mr. Stanley Hatchings, of Risca; the electrical engineer was Mr. W. Horsfall, A.M.I.C.E., of Ebbw Vale, and the general contractor was Mr. A. J. Colborne, of Swindon.

SWANSEA RAGGED SCHOOL.

Messrs. Thomas, Meager, & Jones are the architects of this new building, which is being erected to take the place of the old school. The contractors for the work are Messrs. T. D. Jones, and the old building is to be demolished in order to extend the Central Police Station.

SCHOOL, GARW VALLEY.

A new school has been opened in the Garw Valley. It is designed to accommodate 156 infant scholars, and comprises four class-rooms, opening into a central hall; cloak-rooms are provided, as well as teachers' and caretakers' rooms, stores, etc. The floors of the class-rooms and central hall are laid with wood blocks, whilst the floors of the cloak-rooms, corridors, etc., are of adamantine tiles. The exterior of the building is faced with local stone, with Forest of Dean stone and brick dressings, the roofs being covered with North Wales slates. The building was designed by Mr. D. Pugh-Jones, F.S.I., county architect, Cardiff, under whose supervision the works have been executed by Messrs. E. W. Lougher & Co., of Pontycymmer, at a cost of 3,177*l.* Mr. Thomas Roberts, of Pontycymmer, acted as clerk of works.

SCHOOL, HORWICH.

The foundation-stone of the new Lord-street Council School has just been laid. The school is being built at a cost of 4,000*l.* furnished, and is to accommodate 400 infants. Mr. W. J. Slater, of Horwich, is the contractor, and Mr. Henry Littler, of the County Education Department, the architect.

SCHOOL, RAINWORTH, NOTTINGHAM.

The Nottingham Education Committee have issued the statutory notice of their intention to provide a school for about 600 children at Rainworth, available for the parishes of Blidworth and Rufford. This school is necessitated by the opening up of a new colliery in the district. There will be no competition, as the work will be carried out by Mr. L. Maggs, F.S.I., Architect for Schools and County Buildings.

NEW PARISH INSTITUTE, LOWESTOFT.

Mr. H. C. W. Blyth, M.S.A., architect, of Lowestoft, is the architect for this building, which has been erected at a cost of 4,000*l.* as a memorial to the late rector of Lowestoft, Canon Tupper-Carey, M.A. The institute is a two-story building, comprising a large hall, seven class-rooms, billiard-room, reading-room, etc. The contractors are Messrs. Mobbs Bros.

TRADE NEWS.

The Sheffield Corporation Waterworks Department have just placed a contract for thirty-two patent mechanical pressure filters and auxiliary plant, capable of dealing with a flow of 6,000,000 gallons per day, with the firm of Messrs. Mather & Platt, Ltd., of Manchester.

We are informed that "Ceresit" is being employed by the London & North-Western Railway Company for the waterproofing of two passenger subways at Stonebridge and Bushey; and Messrs. Vickers, Ltd., are about to use it for a large tank, which they are to construct at St. Albans. The tank, which will be of concrete, will be rendered with "Ceresit" mortar varying in thickness from 1½ to 2 inches; the total area of the rendering being 2,022 square yards, for which 500 gallons of "Ceresit" will be required.

The St. Matthew's schools, Tolworth, near Surbiton, have recently been fitted with a number of D. O. Boyd's hygiastic ventilating school grates, supplied by Messrs. O'Brien, Thomas, & Co., Upper Thames-street, E.C., and Excelsior Works, South Bermondsey.

Under the direction of Mr. Ronald P. Jones, architect, 7, Stone-buildings, Lincoln's Inn, W.C., the "Boyle" system of ventilation (natural), embracing Boyle's latest patent "air-pump" ventilators and air inlets, has been applied to the Unitarian Church Hall, North Finchley.

A clock with two 5 ft. dials, and striking the hours, has been erected upon the Parish Church, at Hartshorne, Burton-on-Trent. The work has been carried out by Messrs. John Smith & Sons, Derby, to the general designs of the late Lord Grimthorpe.

Messrs. Samuel Wallrock & Co., have just let upon building lease the site of Nos. 8 and 9, Long Acre, and 16, Garrick-street, W., at a ground rent of over 800*l.* per annum, for the erection of a block of business premises.

The Derwent Joint Small-pox Hospital, Cumberland, is being supplied with Shorland's patent exhaust roof ventilators and special inlet ventilators, by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

Messrs. J. & A. Ogilvie, of Union-street, Aberdeen, the makers of the oak screen which forms the background of the memorial (illustrated on another page this week) to Edward VII. in Crathie Church, have London showrooms at Van Straaten-buildings, 30, Little Britain, E.C. This branch of their business is under the control of their agent, Mr. J. Edwardes-Stevens.

MANCHESTER BUILDING TRADE.

The unrest in the ranks of labour has spread to the building trade, and a strike of all sections connected with the industry in Manchester is threatened for next month. During the last few days the Executive Committee of the National Association of Builders' Labourers has been meeting in Manchester; and at a meeting held in St. Michael's Schools, George Leigh-street, on the 11th inst., it was announced that the masters have been asked to give a minimum of sixpence an hour to all general labourers, of 6½d. to bricklayers' labourers, and 7d. to scaffolders, mill men, iron-fixers, and other special labourers. Some employers are already paying the minimum of 6d., but others are said to have a sliding scale, under which the men cannot estimate their wages until the payment is made. One of numerous complaints made against some of the employers is, that they charge the men a weekly sum for the use of wheelbarrows.

During the last few weeks over 600 general labourers have joined the Union, and the additions expected this week will result in the majority of the labourers in the city being union men. Joiners, bricklayers, wood-cutting machinists, and others are joining in the demand for increased pay, and in their speeches on the 11th inst., Messrs. P. Flanagan (general secretary of the Labourers' Association), J. Cavanagh (Hull), J. Doyle (organiser), E. Donohue (Building Industry Federation), and F. Lowe (Painters' Union) said all the various sections will stand together. The intention is to declare a strike of all connected with the building trade if the employers do not make a favourable response to the demands by October 2.—*Manchester Guardian.*

SCOTTISH BUILDERS' FEDERATION.

The seventeenth annual general meeting of the Scottish Building Trades Federation was held in the Imperial Hotel, Aberdeen, on the 8th inst., when Mr. David Wilson, President, J.P., Edinburgh, presided. The secretary, Mr. T. Ferguson, solicitor, Edinburgh, who presided, in submitting the report, stated that the relations with the operatives were satisfactory, but there were indications of unrest probably as a reflection of what had occurred in other industries. The National Insurance Bill had received the careful consideration of the Executive Committee. There was no industry in the Kingdom that had been more adversely affected by recent legislation than the building trade. Believing that the Bill would place further heavy burdens upon the trade, and that during a period of abnormal depression, the committee were unanimous in their opposition.

The meeting considered the subject of sole contracting. The system was becoming prevalent in Edinburgh and Glasgow, especially in connexion with buildings erected by public bodies. Strong protests had been received from Glasgow and Edinburgh associations. Suggestions were made, and ultimately it was decided that representations should be made by the federation to the Board of Works and to public bodies in Edinburgh and Glasgow, protesting against the system.

THE LORD MAYORALTY, LEEDS.

Mr. W. Nicholson, builder and contractor, of Leeds, has consented to be Lord Mayor of the city for the coming year. Mr. Nicholson is an energetic member of the City Council, and he has been a Past President of the National Federation of Builders and Contractors.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDEEN. — Slaughter house buildings, Hutcheson-street (2,150*l.*); Mr. John Rust, 204, Union-street, Aberdeen.

Ammanford, Anman Valley, and Panrallt.—Schools (4,000*l.*, 3,000*l.*, and 2,800*l.*); Mr. V. Morgan, architect, Spilman-street, Carmarthen.

Annathill. — Additions to public school (1,400*l.*) Architect, care of Clerk, New Monkland School Board.

Ballylesson.—Medical officer's residence and dispensary (1,560*l.*) Clerk, Board of Guardians, Lusburn.

Barnstaple.—Workshops, Newport-road, for the Barnstaple Cabinet Company.

Bedford.—Moravian Church, Queen's Park; Mr. A. E. Allen, architect, 31a, Bridge-street, Banbury; Messrs. J. Corby & Son, builders, Tavistock-street, Bedford.

Bedminster (Bristol). — Catholic schools

* See also our list of Competitions, Contracts, etc., on another page

(4,000*l.*); Mr. G. Bevan, architect, 36, Corn-street, Bristol; Mr. J. Bryer, junior, builder, Bridgwater.

Belfast.—Suites of offices, Donegall-square; Messrs. Blackwood & Jury, architects, 41, Donegall-place, Belfast. Residence, Malone-road; Messrs. Young & McKenzie, architects, 7, Donegall-square West, Belfast; Messrs. Courtney & Co., builders, Shaftesbury-avenue, Belfast. Warehouses for Mr. William Cleveland and Messrs. A. Bulloch & Co.; Messrs. Blackwood & Jury, architects, 41, Donegall-place, Belfast.

Blackpool.—Church and schools, Victoria-street; Architect, care of The Congregational Church Committee.

Blaydon.—Proposed model workmen's dwellings; Mr. George Symon, Surveyor, Blaydon Urban District Council.

Bridgwater.—Courthouse and Police Station (7,350*l.*); Mr. J. E. Fursland, builder, Bristol-road, Bridgwater. Masonic temple (2,000); Messrs. Samson & Coulthurst, architects, Bridgwater.

Brighton.—Cold storage and ice-making buildings (20,000*l.*); Messrs. H. Williams & Co., consulting engineers, 3, Salters Hall-court, E.C.

Bromley (Kent).—Catholic church (2,500*l.*); Mr. E. Goldie, architect, 31, Upper Phillimore-place, Kensington, S.W.

Camborne.—Alterations to offices, Wesley-street, for Messrs. Golman Bros. Alterations to factory for Messrs. Bickford-Smith.

Carlisle.—Additions to premises of Messrs. T. & R. Carlisle, wool and seed merchants (3,500*l.*); Messrs. J. Barbour & Bowie, architects, 53, Buccleugh-street, Dumfries.

Chapel. — Extensions to public school (2,100*l.*); Mr. George Gray, architect, Inverurie, Aberdeenshire.

Cheadle.—Additions, isolation hospital; Mr. F. T. Inskip, Surveyor, Cheadle Rural District Council.

Chesham (Bucks).—Proposed baths; Mr. P. C. Dormer, Surveyor, Chesham Urban District Council.

Connel Feury (near Oban).—Rebuilding portion of Cora Hotel (3,000*l.*); Mr. J. G. Falconer, architect, Oban and Fort William.

Dalton Brook.—Wesleyan Reform School Chapel (650*l.*); Mr. D. B. Jenkinson, architect, Rotherham; Mr. L. Brierley, builder, 24, Henley-street, Masbrough, Rotherham.

Daventry.—Swimming bath; Mr. J. B. Williams, Surveyor, Daventry Town Council.

Dublin.—New lecture hall, Standwith-street, for St. Thomas's Church; Messrs. Blackwood & Jury, architects, 41, Donegall-place, Belfast.

Dudley.—The following plans have been passed:—Thirteen houses off Northfield-road; Messrs. A. & F. Harvey. Workshop, Junction-street; Messrs. Crew & Co. Alterations to White Swan Inn, Castle-street; Messrs. T. & B. Woodhouse. Alterations and additions to factory, Aston-road; Messrs. Chilton Bros. Additions to warehouse, King-street; Messrs. Grainger & Smith, Ltd. A plan has been passed as follows:—Three houses, Dibdale-street; Mr. H. Nicholson.

Dumbarton.—Lodging-house, Risk-street (215 beds); Mr. James Bell, architect, 8, Merry-street, Motherwell.

Durham.—School (8,000*l.*); Mr. W. Rushworth, architect, Shire Hall, Durham.

Egremont.—School (1,000 places); Mr. T. Samuel, Secretary, Education Committee, Wallasey Urban District Council.

Exeter.—Emmanuel Parish Hall (5,000*l.*); Mr. A. J. Pinn, architect, Bedford Circus, Exeter; Mr. E. C. Led, builder, Buddle Park, Exeter. National Provincial Bank of England (11,000*l.*); Mr. J. H. Brewerton, architect, Richmond-chambers, Bournemouth; Messrs. Westcott, Austin, & White, builders, Sumerland-crescent, Exeter.

Farnworth.—Picture palace, King-street; Messrs. Henderson & Brown, architects, Mawdesley-street, Bolton.

Fordyce.—Academy (3,000*l.*), and additions to Cawdor schools (2,000*l.*); Mr. John Whittal, architect, High-street, Elgin.

Forfar.—Lawson Memorial Church (10,000*l.*); Mr. P. McGregor Chalmers, architect, 95, Bath-street, Glasgow. Additions to baths (1,200*l.*); Mr. A. Watterson, Surveyor, Forfar Town Council.

Fusehill.—Buildings near hospital; Mr. H. B. Lonsdale, Clerk, Board of Guardians, Carlisle.

Glasgow.—Clubhouse, Dumbreck-road, for the Haga Castle Golf Club.

Halifax.—Extensions to tapestry department, Clifton Mills (1,500*l.*); Messrs. Nicholas & Welsh, Museum-chambers, Halifax.

Haslingden.—Weaving-shed, etc., Fluxman-road (4,000*l.*); Mr. W. Tattersall, architect, The Lindens, Haslingden. Picturedrome (2,160*l.*); Messrs. Booth & Son, architects, 42, Regent-street, Haslingden; Mr. T. Brown, builder, Whitecraft-avenue, Haslingden.

Hastings.—Additions to Mount Pleasant Congregational schools; Messrs. Coussens & Ruthwell, Cambridge-road, Hastings. Proposed secondary school for girls; Mr. P. O. Buswell, Secretary, Education Committee, Hastings Town Council.

Helensburg.—House and shops, Princes and Sinclair streets (4,000*l.*); Mr. W. Hunter McNab, architect, 121, West George-street, Glasgow.

Hillingdon.—Buildings (1,726*l.*); Mr. C. F. Kearley, builder, 31, Carnaby-street, Regent-street, W.

Hoddlesden.—Winding-house for Messrs. J. Place & Sons, Ltd.

Hove.—Additional ward block at sanatorium (2,580*l.*); Messrs. J. & M. Patrick, builders, Wandsworth. The following plans have been passed:—Twenty-five houses, Tandridge and Tennis roads; Mr. S. H. Burdwood for Mr. T. Richards. A plan has been passed for Mr. A. Carden, for Mr. E. W. Dinnick, for a picture theatre, Western-road.

Hyde.—Additions to dye works, Hyde Junction, for Messrs. Driver, Goodier, & Co.

Inverness.—House, Hill-street (2,100*l.*); Mr. T. Munro, architect, Academy-street, Inverness.

Kidderminster.—Alterations to girls' school, Coventry-street (250*l.*); Mr. E. Harris, builder, Kidderminster.

Kilmichael.—Alterations to public school for the Campbeltown School Board.

Kingswood (Bristol). — Methodist church (4,000*l.*); Mr. W. H. Dinsley, architect, 12, Cleveland-street, Chorley, Lancs.

Kintbury.—Memorial hall (600*l.*); Mr. W. A. Raine, Surveyor, Hungerford (Berks) Rural District Council.

Leagrave.—School (250 places); Mr. F. Spooner, Secretary, Education Committee, Beds. County Council, Bedford.

Lindale-in-Cartmel.—Enlargement of parish church (1,686*l.*); Architect, care of the Churchwardens, Lindale-in-Cartmel Paris Church.

Liscard.—School (900 places); Mr. T. Samuel, Secretary, Education Committee, Wallasey Urban District Council.

Liversedge.—Wool warehouse, Providence Mills, for Messrs. Pyrah & Sons.

Llandudno.—Proposed chancel and chapel at Holy Trinity Church.

Longside.—School (3,000*l.*); Mr. S. Fordyce Anderson, 1, Crown-terrace, Aberdeen.

Mallow.—Fifteen houses (136*l.* each); Mr. Francis Hegarty, builder, care of the Surveyor, Mallow Rural District Council.

Manchester. — Proposed three branch Carnegie Libraries; Mr. Henry Price, architect, Birmingham Town Council.

Mansfield, Woodhouse.—School (7,527*l.*); Mr. J. Greenwood, builder, Mansfield.

Middlestone Moor. — Institute (3,000*l.*); Messrs. Johnston & Son, architects, Cocktonhill, Bishop Auckland.

Monkseaton.—Extensions to railway station; Mr. C. Harrison, engineer, Railway Station, Newcastle.

Monkton (Ayrshire).—School (1,300*l.*); Mr. W. W. Reid, architect, Main-street, Prestwick.

Nantyglo.—Institute and library (1,200*l.*); Mr. Neat, architect, Brynmawr; Messrs. Jenkins & Sons, builders, Brynmawr.

Newcastle.—Block of offices; Messrs. Cackett & Burns Dick, architects, Westgate-road, Newcastle; Messrs. Davidson & Miller, builders, Ridley Villas, Newcastle.

Newton-in-Makerfield. — Isolation hospital (1,600*l.*); Mr. A. Bowes, Town Hall, Earlstown.

Norton.—Pavilion, Norton Playing Field (530*l.*); Managers, Sheffield Training College.

Nuneaton. Proposed dining-hall (1,600*l.*); Architect, care of Mr. C. Blakeway, Board of Guardians, Nuneaton.

Oban.—Conversion of wool mills into house and public hall; Mr. Hugh M'Dougall, builder, Oban, N.B.

Oldham.—Schools (6,000*l.*), in connexion with St. Mary's Roman Catholic Church, Oldham.

Portsmouth.—Extensions to workhouse infirmary (42,890*l.*); Mr. E. H. Mitchell, Portsmouth Board of Guardians, Southport.

Radcliffe.—Weaving shed for the Radcliffe Co-operative Wholesale Society.

Rathdown.—253 houses; Surveyor, Rathdown, No. 1, Rural District Council.

Redditch.—School (6,450*l.*); Mr. A. Vernon Rowe, architect, care of Mr. A. W. Priestley, Secretary, Education Committee, Worcestershire County Council, Worcester.

Rhyme (Aberdeenshire). — Extensions to school (2,000*l.*); Messrs. Brown & Watt, architects, 17, Union-street, Aberdeen.

Richmond.—Receiving homes for children (2,740*l.*); Mr. Edward J. Partridge, architect, Bank-chambers, Richmond; Messrs. Speechley & Smith, builders, Excelsior Works, Richmond. Reconstruction of the Star and Garter Hotel; Messrs. W. A. Lewis & W. R. Waters, architects, 11 and 12, Finsbury-circus, E.C.

Rochdale.—Proposed new General Post Office (20,000*l.*); H.M. Office of Works, Storey's Gate, S.W.

Selton Bagthorpe.—Alterations to school, also new school (3,220*l.*); Mr. J. Greenwood, builder, Mansfield.

Sheffield.—The following plans have been passed:—Public wash-houses, rear of Upperthorpe Baths; Mr. F. E. P. Edwards, City Architect, Sheffield City Council. Warehouse, John-street, for Mr. D. Davies. Twelve houses, Linscott-road, for Messrs. Higton & Son. Four houses, Midfield-road, for Mr. J. Sanderson. Warehouse, Attercliffe-road, for Messrs. T. Andrew & Co. Eight houses, Riverdale-road, for Mr. J. Samuel. Additions and alterations to premises, Bramber-street, for Messrs. Mappins' Masbro' Old Brewery Company. Six houses, Meadow-lane, for Mr. S. Taylor. Five houses, Cruise-road, for Mr. James Samuel. Five houses, Withens-avenue and Overton-road, for Mr. W. J. Pratchett. Four houses, Melrose-road and Coupe-road, for Mrs. Annie Taylor. Additions to premises, Stevenson-road, also additions to premises, Livingstone and Bessemer roads, for Messrs. Jonas & Colver, Ltd. Workshop and additions to offices, Bernard-road, for Messrs. J. & P. Hill. Three houses, Dobbin-hill, for Mr. David Davies. Stores and additions to office, Brightside-lane, for Messrs. W. Jessop & Sons, Ltd. Alterations to Old Tontine Hotel, Dixon-lane, for Colonel Sir J. E. Bingham. Sixteen houses, Carnaby-road, for Mr. G. E. Phillips. Three houses, laundry, and assembly-room, Blackbrook-road, for the Eccleshall Board of Guardians.

Shepton Mallet.—Infectious diseases hospital, laundry, and disinfecting block; Mr. A. J. Pictor, architect, Bruton, Somerset; Messrs. Doddimead & Son, builders, Shepton Mallet.

Shiney Row.—School; Mr. J. W. White, builder, High Barnes Works, General Graham-street, Sunderland.

Shirley.—Proposed nursery buildings, Shirley Warren (2,000*l.*); Architect, care of Mr. A. J. Walden, Clerk, Board of Guardians, Southampton.

Sonning (Berks).—Two houses; Messrs. Walker & Harwood, architect, 17, Pall Mall East, S.W.

South Shields.—Two school departments, Stanhope-road (9,050*l.*); Mr. Stephen Sheriff, builder, Back Woodbine-street, South Shields.

Staverton (Daventry).—Hospital (1,700*l.*); Mr. J. B. Williams, Surveyor, Daventry Rural District Council.

Stockport.—Nurses' home; Architect, care of the Building Committee, Stockport Infirmary.

Stourbridge.—School (3,450*l.*); Messrs. J. Harper & Sons, builders, Blackheath.

Stowmarket. — Proposed school, King's Meadows; Mr. W. E. Watkins, Secretary, Education Committee, East Suffolk County Council, Ipswich.

Strathpeffer.—Post Office (2,000*l.*); Mr. D. Matheson, architect, High-street, Dingwall.

Stretford.—Proposed additions to baths; Ernest Warrall, Surveyor, Stretford Urban District Council. Plans have been passed as follows:—Extensions to offices, Trafford Park, for Messrs. Redpath, Brown, & Co. Thirteen houses, Kwnwood-road, for Mr. Jos. Holt. Additions to Temperance Hall, Church-street, for Stretford Rechabites. Works, Trafford Park, for the British Reinforced Engineering Company, Ltd.

Sunderland.—Proposed training college, Ford Estate, Hylton-road; Mr. H. Reed, Secretary, Education Committee, Sunderland Town Council.

Swansea.—Proposed factory, King's Docks, for M. P. Alrig, Paris.

Thornhill Lees.—Proposed enlargement of school (1,000*l.*); Managers, Church School, Thornhill Lees.

Uppingham.—Proposed laundry at workhouse; Mr. F. Oakley, Clerk, Board of Guardians, Uppingham.

Wallingford.—Additions to hospital (350*l.*); Messrs. Brasher & Sons, builders, St. John's End, Wallingford.

Weymouth.—School (5,360*l.*); Mr. Gough, builder, Clapham Park.

Whaley Thorns.—Fifty houses; Messrs. Green, builders, Whittington, Chesterfield.

Whitley Bay.—Catholic schools; Messrs. Gibson, Steinlet, & Dickson, architects, Camden-street, North Shields.

Wigan.—A plan has been passed for the conversion of workshop into cinematograph hall, etc., for the Trustees of the Scholes Labour Club, Hen-street, Wigan.

Wooler.—Alterations to church (4,000*l.*); Mr. A. B. Plummer, architect, 13, Grey-street, Newcastle.

Worksop.—Additions to Victoria Hospital (2,012*l.*); Mr. J. Doncaster, builder, Worksop.

Yoker.—Additions to Messrs. Bull's Metal & Melliod Company's works (4,000*l.*); Messrs. Warren & Stuart, 94, Hope-street, Glasgow.

CANADIAN ARCHITECTURE.

WE take the following from a paper read by Mr. Percy E. Nobbs at a meeting of the Royal Architectural Institute of Canada at Winnipeg:—

"As Canadian architecture is as yet a small affair, though, I verily believe, a thing of mighty promise for the future, I hope I shall not bore you if I deal very little with its facts and rather profusely with its theories. Theories are, of course, invented to help us to "bear our ignorance," so I take it they are the proper medium wherein to discuss that which is not yet.

And, before going any further, it is necessary, in justice to those who will disagree with what I have to say, to state the fundamental artistic creed underlying what follows, so that they may at once perceive wherein "their doxy" and "our doxy" differ, and leave it at that without further ado, for nothing in this world is less profitable than an argument on matters æsthetic (and, I would add, on matters ethic) when the disputants erect their retorts on foundations different in kind.

Hedonism and Mysticism.

The epicurean sty in which those wallow who eternally do sing "Art for art's sake," and base their æsthetic satisfaction on the mere charm of the senses, is an unsavoury quag wholly unfitted to be considered even as a possible site on which to rear our structure. The Hedonistic theory which measures the arts in terms of pleasure has, unfortunately, permeated the literature of the last century, so that it is now in all men's minds; and that is why the public and the artists of to-day are more thoroughly out of sympathy with each other than ever they were since history began.

And even less suited for a foundation do we consider the clouds of mystification where the idealists flap their undisciplined wings in search of artistic delights "too utterly utter" to be expressed by the aid of any known syntax. To come to the point, let me state briefly that art is a simple and natural human activity, not an inexplicable, quintessential mystery, that its purpose is always expression, that the subject-matter of this mode of expression is that whole range and gamut of emotion and sentiment, and that the means employed—the raw material of this expression—is sensuous pleasure. It is by arrangement that this raw material undergoes its transmutation into that very elusive thing called beauty, best described, in the words of Santayna, as "pleasure regarded as a quality of a thing." Pleasure and pain are, as it were, the light and shade of consciousness. Beauty, you see, is just a state of mind. Without producing that state of mind the arts are dumb.

A little illustration will show you what I mean by artistic expression in this connexion, for there is no art in merely expressing. Such expression merely informs us and leaves us cold. But when form or arrangement enters into the expression its effects are magical. It was many years ago this point was first brought to our attention by an old painter.

"If you are leaving the country," said he, "and sup at a restaurant with the lady of your choice before train time, and say, 'Waiter! Wine list. Thanks! No. 93, Moët and Chandon. That's right!' there is no art, although the mere act of incurring the expense has expressed an emotion; but if you say or sing:—

"'Gae bring to me a pint o' wine,
And put it in a silver tassie,
That I may drink afore I gae
A service to my bonnie lassie'—

that is art, and every man with bowels of compassion who hears not only knows just how you feel, but feels that way himself."

Now this is, I believe, a common-sense view of the great æsthetic problem. Any mere bank director, or Cabinet Minister, or dry-goods clerk could by applying it get an infinite insight into the arts, but persons of these classes, as a rule, much prefer, if they deign to give arts a moment's attention, to content themselves with what they call their likes and dislikes; to approach the arts, that is, as we approach a bar where mixed drinks are sold, for the sake of just as much sensuous pleasure. If a building only "pleases the eye," as the phrase is, it fails utterly as architecture. And how many buildings there are concerning which that is about all that we can say! Now the builders of past generations have succeeded marvellously well, not only to express through what may be called pure design (*i.e.*, structural truth and honest relation between planning and elevating, etc.), but also through the use of ornament added thereto, a wealth of feeling and emotional thought.

Past Ages.

The styles of various periods convey to us the very spirit of the ages that brought them forth. If no Greek or Latin or Early English literature had come down to us we could still reconstruct from extant monuments not only much of the actual history of Greece and Rome and mediæval England, but, what is far more important, the sentiment with which these peoples at certain periods regard life in general. But, more than that, going behind the generalisations of periodic style, we can realise the very spirit in which various types of buildings were wrought, and, more yet, the individual feelings of the individual man who gave character to individual buildings, for architecture is essentially monumental—history writ large and lastingly.

And from such a point of view it is a matter of no small satisfaction to our national interest to realise that at certain periods Englishmen, Scotsmen, and Irishmen had sentiments to express, and a power to express them in no sense inferior to the best in the glory that was Greece or Rome, or Italy or France.

And perhaps our art, so near to nature in the matter of materials and science, so close to humanity in her dependence on social conditions, has expressed better than any other art the peculiar characteristics of nationalities. Certainly, it is the most democratic of all arts; no affair of luxurious personal patronage or public treasure-houses, but a very adornment of popular life, both private and public.

When men have had great feelings to express and great power of expressing them, happily joined with great opportunities, styles have been developed and evolved and brought to perfection, and from these we can deduce something of the everlasting laws and principles of our art in the light of which to model all sorts and conditions of designs.

Think of a real cosy Jacobean dining-room in some old English manor-house. With you, I know, I need not dwell on the elements of such a composition with any searching description. You know how the two great oak beams carry the lesser joisting of the ceiling, and how the plaster is put up between them. You know the mullioned window, with its leaded glazing and iron casements; the broad brick hearth, on which the crimpy iron dogs keep quiet company within the delicately-moulded jambs and lintel; the panelling on the walls; the heavy floorboards; the tapestry at the end; the tall-backed chairs; the squat, pot-bellied table legs—yes, you know! And it is all to speak to you of a certain kind of life and character, which, as I am a builder and not an historical novelist, I shall say nothing more about.

Without a gradually-evolved tradition behind it, in those chief matters of scale and proportion and a naturalness in construction, the thing could convey no impression at all. The ultimate laws of design are all respected there just as truly as in the Doric temple or the Early English abbey, the great Italian palazzo, or City church by Wren. The thing possesses an essential unity of its own, not fortuitous or accidental.

Modern Schools.

Of schools of architectural thought to-day there are two (and I purposely ignore the claims of the Secessionists and Art Nouveautists to form the third. Let the heathen rage!). The great exponents of the academic school recognises the eternal principles of design and composition, the everlasting unities, and they use for purposes of exemplification and instruction a convenient cut-and-dry set of forms—the Order and arches, etc. They fail utterly to interest their votaries and neophites in the technique of the crafts. To them a column is a column, whether made of big stones or little ones, plaster wire, lath, or pine-boards, cast-iron or trelliswork, and their lintel may be one stone or a hundred pieces of terra-cotta. On the other hand, the non-academic school knows naught of the grand manner, and cares still less about the abstract proportions of columns, so they are big enough to hat and do their work in whatever material they have their being. Craftsmanship and the regeneration of ornament and decorative art are their main cares. This they hope to attain chiefly by the study of mediæval technique.

The stronghold of the academic school is, of course, the Ecole des Beaux-Arts in Paris, and, as there is wonderfully little building going on in France, its fruits are to be found chiefly in the United States of America. And London is the stronghold of the modern craftsman architect, with his imitation guilds and highly-coloured politics.

Now if the academic school could be induced to pay more attention to the far-flung vault of Beauvais and the jewelled walls of Blois there would be more hope for them, and if the English exponents of architectural culture would realise that the grand manner as practised in Egypt and Babylon and the cities of Alexander's Empire—and the Imperial Rome and gay Versailles has that in it which would impart a discipline to their planning and a coherence to their composition—they, too, would gain in power of expression. But the rival systems are too deeply rooted each in its own conceit to afford much hope of widened horizons. To come nearer home, there is an interesting development going on. The Anglo-Maniacs of New York have so far challenged the supremacy of the Beaux-Arts' influence that in a recent novel the author makes bold to write the following:—

"Architecture!" said Smagg one day. "There's been no such thing since that first drunk and disorderly Dago tripped over, smashed Corinthian capital, and saw it for the first time after he and the rest of 'em had been messing around it for a thousand years. That there Renaissance you been talking about was nothing but a surgical operation for the emasculation of thought, the first idiot 'correspondence school' for the suppression of intellect. Fenestrations and ratios! Men were so crazy about their foot-rulers they'd rather measure an old cornice than figure out a new groined arch. It took brains and blood to build Karnak and the Parthenon and St. Mark's and Durham and Chartres! But these modern monkeys are only working out puzzle pictures for fools! A man would think the Parthenon had gone wrong and come over and littered all over Manhattan! Greek temples for bun-shops, Greek temples for subway-entrances, and Greek temples for garages! Judging from the Pennsylvania Station, how far have we advanced from the Taj Mahal? Is the Singer Building better than the Doge's Palace? And how about that bum Cathedral, that garbage box with the badly foozled approach? Is it up to the standard of any little old parish church in England?

"Oh, I've been talking with these architect-chaps who think on a scale of one-sixteenth-of-an-inch-to-the-foot, and I know what's wrong. There's a bucket shop called the *Ecole des Beaux-Arts* over in Paris, where the little Yankee kid goes and gives up the last bit of small change of feeling they have, and they get in return a bunch of stock-certificates in a bum gold-brick mine that was played out before it was ever dug, and is now nothing but a *rive gauche* Rathskeller, where the *menu* is hash, sausage, and dope. Then they chest themselves back over the Atlantic, and the hay-seeds of high-life gurgle, 'Oh, ain't them colyums and consoles and cartouches elegant!' That's all they get—a Parisian version of a Renaissance misunderstanding of a Roman translation of the original Greek! Gawd! Every time I see an Ionic column I know it's a vulgar gravestone in memory of the unknown dead. Yes, I know there's a few men trying to do Gothic, though they ain't got no Gothic minds. Well, they're butchering a real style, anyway; and they're to be pitied, because they know right from wrong. But these academic asses, I envy them. They don't even know there *is* any such thing as right!"*

The great leading influence of McKim in American taste has tended latterly towards Roman Renaissance rather than French models, and from that it is but a step to the sobriety of Georgian tradition, the vogue for which is undoubtedly on the increase. But architecture in the States is not a question of evolution of styles, but merely of the institution of fashions, and that is a matter wherein we should do well to fail to flatter our great neighbours by imitating their example.

If the true teaching lies, as I believe, somewhere between the Beaux-Arts and the Arts and Crafts, we are indeed well situated to develop a sound foundation for the future structure of Canadian design. Though the French Canadians have little enough in common with Parisian ideals, they must always constitute a channel through which French influences, both old and new, will

* *Lady Mechante; or, Life as it Should Be.* By Gelett Burgess.

find their way to us, and we can rely on the pushful Beaux-Artist from across the border not to let it be his fault if our cities lack splendid follies, bedight with columns and cartouches. The English culture of the crafts is also with us, and gives every promise of forming a strengthening tie to the bond of our British ideals. Let us hope that our own academically-inclined designers will learn to realise that wrought-iron and cast-iron are two perfectly different things, and that if the tender comes in too high to do their will in marble they will at least take the trouble to redraw the details before calling for its execution in mahogany; and also that the arts and crafty ones among us will try and find out the meanings of the words "scale" and "proportion," and apply that knowledge even in their efforts in opal glass.

The Growth of Tradition.

Tradition grows, it cannot be made, and with reasonable goodwill it might grow very quickly among us. Without tradition we cannot evolve an art at all, and must content ourselves with going on being clever.

But if we can see our way to attaining a tradition, that is only one matter out of many affecting the future of our art in Canada.

Labour and artisanship, these are the most discouraging questions we have to face. Trade unionism, in its early days, did much good, but of late it has tended to produce a degrading slavery, which robs the nations of the best effort of their sons of toil. I try to know and I hope I love my partner, the working man, but I feel the realisation of his pet political hobby would destroy utterly what is left of the soul he once had in abundance.

Ruskin and Morris sought to regenerate the arts through the revival of the happy conditions of the Middle Ages, when a man's chief pride was in his work, as what Time has left of it to us most clearly shows. But since labour has made unnatural laws for itself, to exist by skilled employment or the strength of the hand has come to be a humiliation. Ruskin and Morris failed egregiously. I suppose we architects realise more clearly than other people that the working man, when taken individually, is not as black as he is painted by any means, and that if his master, the contractor, on the one hand, and his master, the union, on the other, would only let him, he would be willing enough to develop a higher ideal of execution and ability to think for himself. I have no hesitation in stating that in the ordinary trades — stonecutter, mason, bricklayer, plumber, and joiner—this country is rapidly going back to a barbarous standard. Eighty, sixty, forty, yes, twenty years ago, all these things were better done in this country than they are to-day. For neither love nor money can I get a ceiling put up in Montreal that will not crack inside three months, and Montreal has lots of ceilings half a century old without a shake in them, and so all through.

Of course, in ordinary work to-day we must just do without ornament and decoration (which, quite as much as reward, are able to sweeten labour), except mere enrichment of the most perfunctory, cast-by-the-yard, stamped-by-the-mile kind. Yet but 500 years ago any cottage, any village church had lavished upon it a taste in design and a skill in execution which would to-day obtain for its author a reputation as a past-master.

Expressing the Conditions.

Well, we must adapt our work to the conditions of our age, and do without a great many nice things, and, above all, we must avoid the temptation to resort to fakes and imitations and shams of better things. That, I think, is the great blot on the taste of our time here—that neither architects, nor contractors, nor workmen, nor clients, nor the general public seem to resent the most palpable shams and hypocrises, and it is in the churches that the defect of stage carpentry instead of building is most in evidence. Canadian churches are sometimes well ventilated, usually well heated, nearly always comfortable, and invariably full of structural and material lies. In notable contrast to the cheapness and vulgarity of our places of worship of all denominations is the good taste and extravagant outlay (and these things do not necessarily always have to go together) on the banks of most of the financial corporations. I am not here to judge between the banker and the parson on the question of which vocation is most necessary. Every community builds its best monuments in honour of that which it most reveres; that has been true since the dawn of civilisation. Undoubtedly, the future of Canadian architecture is bound up with the evolution of the banking-hall. There has been no visible effort in any section of the community to advance the art of church building, which has, from the beginning of historic times, been the main problem of the art.

We shall, therefore, expect that the sentiment of unbounded wealth-rolling prairie, limitless forest, and all that sort of thing, converted into barrels, nay, cargoes of gold will not fail to evince itself in Canadian architecture.

Just as the XIVth-century architecture of our race is inspired in the main by the sense of pageantry and chivalry—the zenith of feudalism in all its glory—while the temper of our art in the XIIIth century was by contrast an affair of disciplined monastic refinement, and in the XVth a decidedly bourgeois affair, so we must expect to see a barbaric plutocracy as the backbone of our social system affecting our art just as did the abbot of 1250, or the baron of 1350, or the burgess of 1450. But that is neither your affair nor mine, gentlemen; what is "our affairs" is to express in our designs the temper of the time we live in, and, just for the initiated, a little of what we feel about it; and we are beginning to do it.

But perhaps I am dwelling too much on the difficulties before us, and not saying enough about the great prospects for architecture as an art in this country.

In art, as in war, it is the opportunity that makes the master, and surely nowhere in the world is our profession better situated. Study and training can perhaps lay the foundations of skill in design, but it is only by actually designing and carrying out work that a man can master this art, trade, and mystery. Wren was about in middle life before he built anything. His early efforts were neither better nor worse than those of other much younger architects, but he got the opportunity and he had the head and the heart to profit by it. And Michelangelo had architecture forced on him late in life, and his earlier efforts were preposterous absurdities, but he profited by experience, lived a great age, and abandoned all the other arts of which he was a master for "the mistress art," and his masterpiece, the Dome of St. Peter's, means something.

Truly, we have the opportunity if we have but the power to avail ourselves of it.

The Conditions in Canada.

And apart from this question of actual chance of practising, we have another very great advantage in our miraculous climate. A friend of mine considers the climate, or rather climates, of Canada excellent, but complains that we have too much of them, and I believe there have been very few normal days during the last ten years.

To the climate I shall add the material available and their market forms, and to the materials I shall add the technical devices for handling them.

Here we have three sets of conditions unlike anything that our ancestors who built so well knew. Surely we can rely on these to help us out of the rut of style-mongering towards the evolution of sane design. Originality in art is not a thing worth striving after for its own sake, and when so sought is fatal to success, but inventiveness has always been the life and soul of our art, and we have got to be inventive, whether we like it or not.

It seems from the look of the plates in the British professional Press to be very difficult to be at all inventive over there. The Georgian plaster ceiling and the Elizabethan plaster ceiling seem to have come to stay. The mullioned country house and the sash-windowed country house seem to be fixed quantities down to their least details, each type maintaining its respectful relation to the work of 1600 and 1750, and this is not unnatural, since the climate and materials are as they were in 1600 and 1750, and the type of window and roof thereby evolved to perfection at these dates cannot be improved upon.

But we should, in establishing our type, derive great benefit from the fact that we have to invent our own solutions of the roof problem, and not accept our great-grandfather's; and as to the window question, there is no really satisfactory solution in sight yet that I am aware of. If we remember that it is the roof and the window that makes the architecture, we see that we have our work before us. The feature of the English architecture—chimneys, parapets, bays, ranges of lights, rainheads, and all the rest of it—are absolutely inappropriate for our use. But the simple inventive spirit in which these things were evolved and welded together in vernacular use and the reserved but kindly sentiment which these evinced we can surely take to heart and apply now.

Our predecessors in this country up to about 1825 were doing pretty well in this matter. The stone houses of Quebec and Nova Scotia and the clap-board houses of New England showed real evolution of style, and in them a good many of our problems were solved at an early date. The lamentable thing is that the secret has been lost, and we have now to substitute architectural education at universities and other temporary expedients till such time as it is regained. To think that neither for love nor money could such a thoroughly sound piece of work, sound in taste and sound in construction, be put up to day in any town or village throughout this broad Dominion as can be found, once at least in five miles, on the shore all the way from Mulgrave Straits to Ottawa City, and all dated before 1840!

Tradition v. Scholarship.

Now when I say we cannot borrow a tradition ready-made from Europe or anywhere else, I must not be understood as deprecating the study of European architecture. It is for this very reason that the study of ancient architecture can do us nothing but good. The master builders of 1370 did not study any ancient architecture at all, but then they had traditions, and the same applies to the master builders of 430 B.C.

When, for a variety of causes, which it is quite beyond the scope of the present paper to analyse, the XVIIIth-century tradition was lost in the XIXth-century revivals and scholarship was resorted to as a substitute, artistic achievement in design ceased altogether for the space of half a century or more. But certainly we need have no fear of scholarship as long as we do not misuse it and regard it as technology. The masterpieces of the past, if approached in the light of the theory with which we started, can show us many a useful principle in design—how to express sentiment by means of the beauty that is in stone and brick and other common things. And besides that, they can fill our hearts with the very soul and spirit of many a bygone poet in stone, when for a time we drop the inquiry of how the thing is done, and are content to apprehend the resulting meaning, for to that end were these things created.

But we allow the false hedonistic theory of art to possess us, and what can scholarship do for us? We would then approach the very Parthenon, not for its meaning, but for a sensuous satisfaction; we would conclude that this building was very successful because so many people "liked it"; and we would assume some magic virtue to "please" in the proportions of its part as such, and probably miss the spirit of the thing as a significant whole. Then, in the hope of giving as much "pleasure" as is possible in this sad world, and getting as much credit for it in fame and dollars as we could, we would proceed to put up things as like it as we could, which, I believe, is the practice of fellows of the baser sort, who, having eyes, yet do not see. Scholarship pursued in that spirit leads nowhere.

Honesty in Design.

Our responsibilities are immense. Every time we put up a meaningless ornament, a blank cartouche, run a moulding round three sides of a stair well in plaster, and the fourth in cast-iron, build a stone front with brick flanks, rule ashlar joints in Caen stone cement, make a false construction or emulate a superior material we prostitute the ideals of our art. All these things come so easily, naturally, and logically once we accept the theory that is in the function of the arts to please.

But when art is recognised as the most potent of modes of expression, these devices fail utterly.

It may be some time before the new philosophy of art gains general acceptance among designers. . . . It will be longer still before it becomes common knowledge, and till then our lot will remain a hard one, out of sympathy with our public and our executant labour.

In the present lamentable state of ignorance or rather positive misinformation on the subject, beauty is taken to be a matter of prescription, like a peach melba or a mint julep. "Take four Ionic columns, put them in a row with the caps uppermost, flank with ashlar pilons pieced with bulls' eyes, garnished with cartouches on top; over the column place an entablature, with blocking course or parapet to taste; serve as a bank. If the columns are large and ripe flute them, roof with a skylight powdered with snow, and serve as a picture-gallery. If the columns are small and meagre then pierce the pilons with windows as required and serve as bank manager's house. Note.—The other ingredients will in all cases be proportionate to the columns as explained in preliminary chapter of this cook book."

There is probably a really best way to build a bank of given size in Canada, just as there is to build a temple of given size in Greece, or a parish church in England. Then, again, a post-office, a museum, a private house should be very different from the bank, temple, or church, and from each other, not only in size and form, because the practical requirements are different, but in sentiment and expression, because the ideas associated with these things are so very different.

Yet, if all these things are in Canada, and done in one decade, they should express that, too, in a certain technical similarity. Now I think we all have a good deal to learn, because we have not established the type of our cycle very clearly, and we are still at sixes and sevens with our tradition. The French, who profess to know, say: "L'art c'est d'être toujours soi même."

These, gentlemen, are the conditions of our competition; designs should be sent in to-morrow, and the award will be made on doomsday.

The Future.

I verily believe that the next fifty years will decide the type and character of Canadian architecture for centuries to come. Is it to become a blind, second-hand, late-in-the-day imitation of the art of luxurious cosmopolitanism which passes muster in the United States, or is it to express something distinctive and characteristic of our aspirations and institutions and the sources from which they spring.

If we have any hopes or intentions towards this latter alternative, it is high time we bestirred ourselves to that end.

The first and most essential step to take is the institution of travelling studentships, that our young men may go to Europe and see for themselves that the traditions of our civilisation are something more than the tricks of manner invented for the delectation of Louis XIV., and watered down in the practice of the U.S.A. offices, to which our best draughtsmen drift at present for wider experience.

Such scholarships should involve at least as much attention to the architecture of the United Kingdom as to that of France and Italy.

The next matter to consider is that of museums. The splendid model of the Trocadero Museum, of Paris, should find its counterpart in each of our great cities. At the Trocadero there is an historically-arranged collection of many thousands of casts and full-sized models of French architecture and sculpture, with subsidiary collections representing the typical achievements of different countries. It has been my endeavour for several years past to make such collections possible for us. The great difficulty has been the lack of initiative at South Kensington, where one can buy a cast or photograph of almost any subject of art in Europe in five minutes, and where, neither for love nor money, can you obtain a photograph of an English building or cast of an English arch mould or niche figure. I am glad to say that a beginning is being made at the Victoria Memorial Museum at Ottawa, and that within a couple of years I hope to see there a collection of architectural ornament and sculpture in three dimensions of equal scope:—

(*a*) Classic and Italian.
(*b*) French.
(*c*) English—at last!

Also that the museums now in course of erection at Toronto and Montreal will ere long be provided with a properly-selected set of casts and models to illustrate the evolution of British art.

Such a collection as I propose would be an educational force of immense value in any community to the designers and to the general public alike.

A third matter would be the establishment of a proper system of indentured pupilage. Our young architects learn their trade too cheap, and, like anything else that is too cheap, what they get in the deal is often not worth having. I am a strong believer in the good old system of apprenticeships in the interest of the student, the principal, and the art.

We are prone, on this continent, to expect too much of schools of architecture at universities. The result is that such schools have to do a lot of teaching which is mere technology, and are unable to find time in the curriculum for the foundations of culture so essential to our vocation as artists and as professional men.

I have endeavoured to enunciate a plain common-sense theory of art, which would guide us to use our art rather than to play with it—to express rather than to please. I have endeavoured to suggest what some of the main meaning and feelings contained in our art might be; I have enumerated the disabilities under which we labour and the advantages we enjoy; and I have ventured to suggest certain steps for the fuller realisation of those great advantages. Our art in this land has plenty of head behind it, and plenty of hand in it, but it still lacks something in matters pertaining to the heart."

LONDON COUNCILS.

Barnet.—Plans have been passed by the Urban Council for a block of offices, in Wellhouse-lane, for the Guardians of Barnet Union.

Charlton.—The building formerly occupied by the Lee District Board of Works is to be repaired at a cost of between 350*l.* and 500*l.* jointly by the Greenwich, Lewisham, and Woolwich Councils, who now have interests in same, and tenders are to be invited by the Greenwich Council for the work.

East Molesey.—The pathways on the south side of Beauchamp-road and the west side of Seymour-road are to be made up at an estimated total cost of 143*l.*

Feltham.—A plan submitted by Mr. W. Harbrow for alterations to premises in Railway-place, occupied by the Ideal Composition Company, Ltd., has been passed.

Finchley.—At the last meeting of the Urban District Council, Mr. J. A. Craig, of the Bucks Education Office, Aylesbury, was appointed architectural assistant for about twelve months in connexion with the new school proposed to be built in New North-road, at a salary of 3*l.* 5*s.* per week. The following plans have been passed:—Mr. A. Marchi, motor garage, Holden-road; Mr. S. J. Hunnings, twelve houses, Windermere-avenue; Mr. A. J. Harris, five houses, Lankaster-gardens. The following plans were lodged:—Mr. W. Peachey, four houses, Etchingham Park-road; Mr. G. F. Taylor, building line, Regent's Park-road; Mrs. Garcia, motor garage, Kingswood, Dollis-avenue.

LAW REPORT.

Howlett *v.* Harrods, Ltd.

THIS case, which came before the Vacation Judge, Mr. Justice Lush, on Wednesday, arose out of certain structural alterations on premises of the defendant adjoining the flat of the plaintiff, and which the latter complained constituted an annoyance to him, and obtained an injunction restraining the defendants from continuing the nuisance.

His Lordship remarked that this was the case where the workmen worked all night.

Mr. Bramwell Davis, K.C. (for the applicant), agreed, and said there was now an affidavit from the managing-director of Harrods, saying, he did not intend to work any more at night. Therefore, he asked his learned friend on the other side for an undertaking to that effect.

The Court had already granted an interim injunction against any work being done between the hours of 10 p.m. and 6 a.m., and this had not been obeyed.

Mr. Hunt, for Harrods, said there was some difficulty in giving such an undertaking as asked. Some of the complaints concerned the taking into the building of iron girders, weighing between ten and twelve tons, at night. Unfortunately, this had to be done under the London County Council regulations, and could not be helped. One other complaint concerned the working of some plasterers at night; but that could not constitute an annoyance.

His Lordship: Why cannot you give an undertaking that it will not be carried on?

Mr. Hunt said the difficulty was, that under the injunction, if they gave such an undertaking, it might lead to difficulties. Some night work had been going on, but was not causing any annoyance at all.

His Lordship said he had carefully confined the injunction to any form of annoyance to the occupant of the flat. In large buildings it was very difficult to know how much noise was made.

Mr. Hunt pointed out that Harrods had a large number of flats, whose tenants were clients of theirs, and they desired to keep on the best of terms with them. There may have been isolated occurrences, which, however, did not justify an injunction. He (Counsel) asked for the application to stand over, the defendants, at the same time, saying that they would take all reasonable steps to prevent any annoyance.

His Lordship: Mr. Davis, cannot you arrange this matter?

Mr. Davis said this was not the first time the thing had occurred. In April, 1910, the plaintiff's wife, Mrs. Howlett, wrote to the defendants, and an undertaking was given but not kept, and now plaintiff placed no reliance on the defendant's undertakings.

His Lordship thought the only thing was an injunction. He had no doubt Messrs. Harrods had the best of intentions in making no noise at all, but the contractors might make noises, and an injunction would stop that.

Mr. Hunt: There may be an accidental noise, my lord?

His Lordship: But surely that would not be treated as a nuisance?

Mr. Davis: No, of course not. The plaintiff (added Counsel) had been most lenient, but the noises went on during his absence from his flat, and the poor unhappy cook suffered terribly.

His Lordship said what the defendants did was to let a flat to a gentleman, and then to make such a noise that he could not live in it, and then they gave a promise not to continue it.

Mr. Hunt said he could not give an undertaking, as the consequences were so serious. He asked for the motion to stand over, with liberty to restore.

His Lordship thought it very regrettable that the parties could not come to some arrangement. He would allow the matter to stand over, but would continue the injunction.

PATENTS.

APPLICATIONS PUBLISHED.*

19,346 of 1910.—Domenico Accettola: Manufacture of artificial marble and the like.

19,401 of 1910.—David Barclay: Method of hinging casements.

25,011 of 1910.—Theodor Vogt: Process and apparatus for making cement stone slabs.

25,286 of 1910.—Walter Sommer: Draught excluders.

25,922 of 1910.—Joseph Crook: Means for connecting closet-seats and covers to the fixed portion of the seat.

25,947 of 1910.—Adolf Vietor: Gripping tools such as pipe wrenchers, lathe carriers, and the like.

586 of 1911.—Marcel Lamort: Machine for cutting and perforating sheet metal.

2,865 of 1911.—Fernand Paul Raoul Lancel: Kilns for bricks and the like.

7,963 of 1911.—John Bird-Howard: Window frames and sashes.

9,625 of 1911.—William Edward Lake (Kell Electric Machine Company): Machine for routing and other wood-working operations.

9,628 of 1911.—William Edward Lake (Kell Electric Machine Company): Guide devices for routing and like wood-working machines.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competitions, —; Contracts, iv. vi. viii. x.; Public Appointment, xvii.; Auction Sales, xxii.

Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisement; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

Competitions.

SEPTEMBER 12-25.—**Athens.**—COURT OF JUSTICE.—An international competition is instituted by the Ministry of the Interior, for the erection of Court buildings, to cost 160,000*l*. The *Official Gazette* may be seen at the Library of the R.I.B.A.

SEPTEMBER 15. — **Lowestoft.** — SCHOOL. — The Lowestoft Education Committee invite designs for an elementary school for 500 boys at Romanhill. Three premiums are offered: 20*l*., 10*l*., and 5 guineas. See advertisement in issue of June 16 for further particulars.

SEPTEMBER 16. — **Manchester.** — LIBRARY AND ART GALLERIES.—Limited to the ten selected competitors in the first competition. See issue of June 23, p. 780.

OCTOBER 4. — **Easington R.D.C.** — 100 model houses for Murton Colliery, Durham. 2½ per cent. on net cost to successful architect.

OCTOBER 7. — **Barnsley.** — EXTENSION OF BATHS.—The Barnsley T.C. invite drawings for proposed extension of Public Baths. Three premiums are offered—50*l*., 30*l*., 20*l*. See advertisement in issue of August 11 for further particulars.

OCTOBER 7. — **Evesham U.D.C.** — Designs for laying out site and erecting thereon thirty cottages. Particulars from the Clerk to the Council.

OCTOBER 12.—**Coseley.**—Plans are invited for a school to accommodate about 200 children. Particulars from the Education Offices, Coseley, near Bilston.

OCTOBER 14. — **Bristol.** — ALTERATIONS IN THE GRAND HOTEL. — Particulars from Mr. F. A. Jenkins, 44, Corn-street, Bristol.

OCTOBER 28. — **Salford.** — Extension of office accommodation on workhouse site at Eccles New-road. Premiums 20*l*. and 10*l*. Particulars from the Board of Guardians, Salford. Limited to architects practising in Salford and district only.

OCTOBER 30.—**Holland.**—STAINED GLASS WINDOW.—Designs are invited for a stained glass window to be erected in the University at Groningen. See advertisement in issue of June 9 for further particulars.

OCTOBER 31. — **Marylebone.** — NEW MUNICIPAL BUILDINGS.—Premiums of 100*l*., 75*l*. 50*l*. The assessor is Mr. Henry T. Hare, F.R.I.B.A. See advertisement in issue of July 14 for further particulars.

NOVEMBER 1. — **City of St. Petersburg.**—MONUMENT TO ALEXANDER II.—Particulars in our issue of August 13, 1910.

NOVEMBER 30.—**Cardiff.**—TECHNICAL INSTITUTE.—The Cardiff Education Committee invite designs and estimates for a technical institute. See advertisement in issue of August 18 for further particulars. Successful architect to carry out work. Premiums of 125*l*., 75*l*., and 50*l*. to other competitors. Mr. J. S. Gibson, assessor.

NOVEMBER 30. — **Hastings.** — EAST SUSSEX HOSPITAL.—The Joint Committee of the East Sussex Hospital and King Edward VII. Memorial Funds invite designs for new hospital. See advertisement in issue of August 25 for further particulars. Premiums of 125*l*., 75*l*., and 50*l*. Mr E. T. Hall, assessor.

DECEMBER 29. — **Glasgow.** — DESIGN FOR A BRIDGE.—Designs are invited (Alexander Thomson Travelling Studentship) for a bridge. Premiums of 60*l*. and 20*l*. are offered. See advertisement in issue of December 24 for further particulars.

JANUARY 29, 1912.—**Montevideo.**—Government palace (premiums, 2,125*l*. and 850*l*.) and town improvement scheme (premiums, 1,060*l*., 640*l*., and 425*l*.). Conditions may be seen at the Board of Trade, 73, Basinghall-street, E.C.

JANUARY 31, 1912. — **Australia.** — DESIGNS FOR FEDERAL CAPITAL CITY.—The Government of the Commonwealth of Australia invite competitive designs for the laying out of this Federal capital city. See advertisement in issue of September 1 for further particulars.

JULY 1, 1912.—**Dusseldorf.**—A plan for the extension of the City of Dusseldorf. Premiums of 1,000*l*. to 375*l*. Conditions on application to the Chief Burgomaster, Dusseldorf.

NO DATE. — **Nottingham.** — BAPTIST CHURCH AND PREMISES.—Limited to Nottingham architects. Particulars from Messrs. Rorke & Jackson, solicitors, King-street, Nottingham.

NO DATE.—**Rochdale Infirmary.**—EXTENSIONS.—Assessor, Mr. Alex. Graham, F.R.I.B.A.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

SEPTEMBER 16. — **Blarmacfoldach.** — SCHOOL.—Erection of school and teacher's house. Plans seen, and quantities from Mr. J. G. Falconer, architect, Fort William.

SEPTEMBER 16.—**Llandrindod Wells.**—SHOPS, ETC.—Erection of a block of shops and two houses. Plans and specification from Mr. W. Scott-Deakin, F.R.I.B.A., architect, Shrewsbury.

SEPTEMBER 16.—**Waberthwaite.**—VILLA.—Erection of a villa. Mr. W. T. Noon, Waberthwaite, Cumberland.

SEPTEMBER 18.—**Conway.**—RESIDENCE.—Erection of a residence. Messrs. Richard Davies & Son, L.R.I.B.A., architects, Bangor.

SEPTEMBER 18.—**Dundalk.**—OFFICES.—Erection of offices in Barrack-street. Plans and specifications from Mr. J. F. M'Gahon, architect, Exchange-buildings.

SEPTEMBER 18. — **London.**—ENCLOSURE.—Erection of a cinematograph enclosure at Goulston-street Baths, Stepney. Borough Engineer, Mr. M. W. Jameson, A.M.Inst.C.E., Municipal Offices, 15, Great Alie-street, Whitechapel, E. Deposit of 1*l*.

SEPTEMBER 18.—**Rhynie.**—ALTERATIONS.—Additions and alterations at Rhynie Public School. Plans and specifications with Messrs. Brown & Watt, F.R.I.B.A., 17, Union-terrace, Aberdeen.

SEPTEMBER 18. — **Sheringham.**—ROOM.—Erection and completion of proposed cloakroom, etc., Beeston Approach. Quantities from Mr. F. Hall Smith, Surveyor to the Council, Sheringham.

SEPTEMBER 18. — **Wakefield.** — PLANT-HOUSE.—Erection of a plant-house at the park. Plan and specification seen, and quantities from Mr. J. P. Wakeford, A.M.Inst.C.E., City Surveyor, Town Hall, Wakefield.

SEPTEMBER 19.—**Skelmanthorpe.**—SHED.—Erection of a weaving shed at Tenter Croft mills. Plans seen, and quantities from Mr. J. Berry, architect, 3, Market-place, Huddersfield.

SEPTEMBER 20.—**Aberdare.**—HOUSES.—Erection of seventeen dwelling-houses at Godreaman for the Fforchneol Building Club. Plans and specification with Mr. C. H. Elford, architect, 32, Canon-street, Aberdare.

SEPTEMBER 20.—**Cardiff.**—SHED.—Extension of the existing waggon shed at the cleansing depôt. Drawings and specification seen, and form of tender from the City Engineer, City Hall, Cardiff.

SEPTEMBER 20.—**Kinsale.**—COTTAGES.—Erection of forty-six cottages. Mr. J. Murphy, Clerk, Council Office, Kinsale.

SEPTEMBER 21. — **Darlington.** — ADDITIONS.—Erection of additions to the Corporation-road School. Plans and specification seen, and quantities, on deposit of 2*l*. 2s., from Mr. George Winter, Borough Surveyor, Town Hall.

SEPTEMBER 21. — **London.** — HOUSE, ETC.—Enlargement of Chief Engineer's house and erection of lavatories on the Bancroft-road premises, Mile End, E. Specification from Mr. T. Rowland, Acting Clerk to the Guardians, Guardians' Offices, Bancroft-road, Mile End, E.

SEPTEMBER 22.—**Bempton.**—SCHOOL.—Erection of a Council school. Plans seen, and quantities, on deposit of 1*l*. 1s., from the Building Surveyor, County Hall, Beverley.

* SEPTEMBER 22.—**Watton.**—NEW INFIRMARY.—The Guardians of the Wayland Union, Norfolk, invite tenders for new Infirmary buildings. See advertisement in this issue for further particulars.

SEPTEMBER 23. — **Mansfield.** — SCHOOLS.—For alteration of the chapel and schools. Drawings and specifications with the Surveyor, Mr. E. P. Cook, A.M.Inst.C.E., Leeming-street, Mansfield.

SEPTEMBER 23.—**Morpeth.**—ADDITIONS.—Alterations and additions to premises, Bridge-street. Drawings and specifications seen, and quantities, on deposit of 1*l*. 1s., from the architect, Mr. C. Franklin Murphy, Newgate-street, Morpeth.

* SEPTEMBER 23.—**South Chingford.**—SCHOOL.—The Essex Education Committee (Epping District Sub-Committee) invite tenders for public elementary school in the New-road, South Chingford. See advertisement in this issue for further particulars.

SEPTEMBER 25.—**Bristol.**—TRANSIT SHED.—Construction of a single-floor transit shed on the west wall of the Royal Edward Dock, Avonmouth. Deposit of 5*l*. to Mr. W. W. Squire, Engineer, Engineer's Office, Cumberland-road, Bristol.

SEPTEMBER 25.—**Chesterfield.**—COTTAGES, ETC.—Erection of two cottages and appurtenant buildings at the junction of Rothervale-road with Storforth-road, South Ward. Plans, specification, and form of tender, on deposit of 2*l*. 2s., from the Borough Surveyor, Salter Gate.

SEPTEMBER 25.—**Elworth.**—CHAPEL, ETC.—Erection of chapel and school. Plans and specifications with Messrs. A. Price & Son, architects, Sandbach.

SEPTEMBER 25. — **London.** — REPAIRS. — The Council of the Metropolitan Borough of Greenwich invite tenders for external repairs at the baths and washhouses, London-street. Specifications seen, and forms of tender from Borough Engineer, Town Hall, Greenwich.

SEPTEMBER 26.—**Aspatria.**—HOUSES.—Erection of two dwelling-houses. Plans and specifications with Mr. J. Henney, architect and surveyor, 39, Senhouse-street, Maryport.

SEPTEMBER 26.—**Epsom.**—WARD.—Erection of an operation ward at Workhouse Infirmary. Drawings, specification, and form of tender, on deposit of 10s., from the Architect, Mr A. C. Williams, 53, Doughty-street, W.C.

* SEPTEMBER 27. — **Ash-next-Sandwich.** — PARISH HALL.—Tenders are invited for new parish hall, etc. See advertisement in this issue for further particulars.

* SEPTEMBER 27.—**London, S.W.**—REPAIRS.—The Metropolitan Asylums Board invite tenders for repairs to roof and gutters at Fountain Hospital, Tooting, S.W.—See advertisement in this issue for further particulars.

* SEPTEMBER 27.—**London, W.**—EXTENSION OF DINING-HALL.—The Guardians of Paddington invite tenders for extension of dining-hall at Workhouse, No. 5 Woodfield-road, Harrow-road. See advertisement in this issue for further particulars.

SEPTEMBER 27. — **Sevenoaks.** — ADDITIONS. — Alterations and additions to the Children's Homes, Chipstead Common. Plans and specifications seen, and quantities from the architect, Mr. Ernest Pawley, 80, High-street, Sevenoaks, on deposit of 1*l*. 1s.

SEPTEMBER 28.—**Widnes.**—HALL.—Erection of a new drill-hall. Plans and specifications with the architect, Mr. J. P. Fraser, 14, Elliot-street, Liverpool.

* SEPTEMBER 29. — **Birkenhead.** — SORTING OFFICE.—The Commissioners of H.M. Office of Works and Public Buildings invite tenders for new sorting office at Liscard (Birkenhead). See advertisement in this issue for further particulars.

* SEPTEMBER 29. — **Southampton.** — IRON COOKERY-ROOM.—The Southampton C.C. invite tenders for a corrugated-iron cookery-room at Broughton Council School. See advertisement in this issue for further particulars.

OCTOBER 2.—**Chertsey.**—HOME.—Erection of a home for children. Deposit of 1*l*., to Mr. H. E. Paine, Clerk, 80, Guildford-street, Chertsey.

OCTOBER 2.—**Glanton.**—ALTERATIONS.—Alterations and improvements to church and manse. Plans and specifications with Mr. G. Reavell, jun., A.R.I.B.A., Alnwick.

* OCTOBER 2. — **Ottershaw.** — HOME FOR CHILDREN.—The Guardians of Chertsey invite tenders for a home for children. See advertisement in this issue for further particulars.

* OCTOBER 3. — **Birmingham.** — TELEGRAPH STORES. — The Commissioners of H.M. Works and Public Buildings invite tenders for the finishings (second) contract at block C, Birmingham Telegraph Stores. See advertisement in this issue for further particulars.

* OCTOBER 5.—**London.**—EXTENSION OF LAND REGISTRY.—The Commissioners of H.M. Works and Public Buildings invite tenders for extension of the Land Registry. See advertisement in this issue for further particulars.

OCTOBER 7.—**Halifax.**—SHELTERS.—Erection of tramway shelters. Particulars from Borough Engineer, Town Hall, Halifax.

NO DATE.—**Aberdeen.**—THEATRE.—Erection of an electric theatre, 476, Union-street, Aberdeen. Apply to the British Cinematograph Theatres, Ltd., 199, Piccadilly, London, W.

NO DATE.—**Bewdley.**—ALTERATIONS, ETC.—For additions and alterations to Lax-lane school. Quantities, on deposit of 2*l*. 2s., from Messrs. Pritchard & Pritchard, architects, Bank-buildings, Kidderminster.

NO DATE.—**Crossgates.**—VILLAS.—Erection of two semi-detached villas. Mr. Eric V. Wimpenny, architect, West Bar-chambers, 38, Boar-lane, Leeds.

NO DATE.—**Cushendall.**—CHURCH.—Extension and improvements to R.C. church. Plans, specifications, and particulars from Messrs. Moore & Flanigan, architects, 35, Royal-avenue, Belfast.

BUILDING—*Continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

No DATE.—**Cushendall.**—HOTEL.—For rebuilding hotel. Plans and specification from the architects, Messrs. Connolly & M'Avoy, M.R.I.A.I., Oxford House, 35, Oxford-street, Belfast.

No DATE.—**Dublin.**—WORKS.—For building a new printing works at Boyne-street. Quantities from Messrs. Morris & Co., surveyors, 69, Harcourt-street, Dublin. Messrs. Doolin & Butler, architects, Dawson-chambers, Dublin.

No DATE.—**Dwygyfylchi.**—COTTAGE.—Erection of a cottage. Messrs. Richard Davies & Son, L.R.I.B.A., architects, Bangor.

No DATE.—**Ilkley.**—RESIDENCE.—Erection of a residence. Messrs. Empsall & Clarkson, architects and surveyors, 7, Exchange, Bradford.

No DATE.—**Llangammarch Wells.**—ADDITIONS.—Alterations and additions to Afan Lodge, comprising new dining and billiard rooms, etc., and about twenty bedrooms. Plans, specification, and particulars from Messrs. Alfred Swash & Son, F.R.I.B.A., architects, Llandrindod Wells.

ENGINEERING, IRON, AND STEEL.

SEPTEMBER 18.—**Radcliffe.**—PLANT.—Erection of a water-softening and purifying plant at electricity works. Specifications with the Electrical Engineer, Electricity Works.

SEPTEMBER 19.—**Castleford.**—HEATING.—For a new heating apparatus at Allerton Bywater Lock-lane Council School. Specifications from Mr. J. H. Thorpe, Divisional Clerk, Education Office, Castleford, W.R.

SEPTEMBER 28.—**Edinburgh.**—HEATING.—For installation of heating apparatus in new science laboratories at George Heriot's School. Plans and drawings seen, and specifications at the office of the Superintendent of Works, Mr. Peter MacNaughton, S.S.C., Clerk and Law Agent, Heriot Trust Offices, 20, York-place, Edinburgh.

SEPTEMBER 30 — **Varna (Bona).** — STATION.—Erection of a power station. Particulars from the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C.

OCTOBER 5.—**Margate.**—ADDITIONS, ETC.—Alterations and additions to purifying-house at gasworks. Drawings and specification with the Company's Engineer and Manager, Mr. J. M. Campbell, Isle of Thanet Gas, Light, and Coke Company. Deposit of 2*l.* 2s.

OCTOBER 9.—**Horton.**—RAILWAY SIDINGS.—The Asylums Committee of the London C.C. invite tenders for the construction of railway sidings to connect the various parts of the Horton Estate, Epsom, Surrey, with the London and South-Western Railway at Ewell. Specification and schedules, with plans, from the Clerk of the Committee, 6, Waterloo-place, London, S.W., on deposit of 5*l.* for each copy.

OCTOBER 23.—**Shotley Bridge.**—HEATING, ETC.—Erection of a heating and hot-water installation at the Whinney House Estate. Deposit of 5*l.* for specifications, from the consulting engineers, Messrs. Tennant & Barrs, Cathedral-buildings, Dean-street, Newcastle-upon-Tyne.

No DATE.—**Birmingham.**—WELL, ETC.—Construction of a cast-iron lined well, and sinking a bore-hole. Specification from Mr. J. Cox, Superintendent Engineer, Kent-street, Birmingham.

No DATE.—**Hindley.**—HEATING.—For the erection of heating apparatus at Lowe Green Council school, Platt Bridge. Particulars from Mr. Oswald P. Abbott, Surveyor to the Council.

FURNITURE, PAINTING, MATERIALS, etc.

SEPTEMBER 18.—**Brentwood.**—PAINTING, ETC.—For inside repairing and repainting of cottages. Specification with Mr. A. J. Meeson, Town Hall, Brentwood.

SEPTEMBER 18.—**Cardiff.**—PAINTING, ETC.—For painting and renovating the interiors of the Nonconformist and Episcopal chapels and exterior of the manager's house at the Cardiff Cemetery. Specification and particulars from the City Engineer, City Hall, Cardiff.

SEPTEMBER 18. — **Lincoln.** — PAINTING. — For painting of the external parts of the Workhouse. Specification at the Clerk's Office, Workhouse.

SEPTEMBER 18.—**Macclesfield.**—PAINTING.—For painting exterior of Workhouse. Particulars from the Workhouse Master.

SEPTEMBER 18.—**Trawden.**—PAINTING, ETC.—For painting and decorating two cottages, two shops, and stables. Particulars from Manager, Trawden Co-operative Society, Ltd.

SEPTEMBER 19.—**Bacup.**—PAINTING.—For painting Cowpe Mills. Specification from Borough Engineer, Municipal Offices, Bacup.

SEPTEMBER 19. — **Etherley.** — PAINTING.—For painting and colouring Etherley Council School. Specification from Mr. J. T. Rudd, Clerk, Cockton-hill, Bishop Auckland.

SEPTEMBER 19. — **Keighley.** — PAINTING.—For interior painting at the Workhouse. Quantities from Messrs. Moore & Crabtree, architects, York-chambers, Keighley.

SEPTEMBER 19. — **Rushyford.**—PAINTING.—For painting and colouring Rushyford Council School. Specification from Mr. J. T. Rudd, Clerk, Cockton-hill, Bishop Auckland.

SEPTEMBER 20. — **Barrow-in-Furness.**—PAINTING.—For the outside painting at the Cottage Homes. Specification with Mr. H. T. Fowler, A.R.I.B.A., 6, Cornwallis-street, Barrow.

SEPTEMBER 20.—**Bootle.**—PAINTING.—For painting the railings, gates, etc., at the Derby-park and Peel-road children's playround. Specification seen, and forms of tender from the Borough Engineer, Town Hall, Bootle.

SEPTEMBER 20.—**Leeds.**—PAINTING, ETC.—For cleaning down, painting, etc., various rooms and offices in the Town Hall and Municipal-buildings, Leeds. Specifications seen, and schedules from Mr. W. T. Lancashire, City Engineer, Municipal-buildings, Leeds.

SEPTEMBER 20.—**Winsley.**—DECORATION, ETC.—For extensive decorative repairs and general work at the Sanatorium. Specification from Mr. Frederick Jones, Secretary, Winsley Sanatorium, near Bath.

SEPTEMBER 21.—**Darlington.**—PAINTING.—For painting interior of Fever Hospital. Specification seen, and quantities from Mr. G. Winter, Borough Surveyor, Town Hall.

SEPTEMBER 21. — **Salisbury.**—PAINTING.—For painting the main block of Workhouse. Specification from Messrs. J. Harding & Son, High-street, Salisbury.

SEPTEMBER 21.—**Winchester.**—PAINTING.—For painting the Guildhall. Specification from the City Surveyor, Guildhall, Winchester.

SEPTEMBER 23.—**Pentre.**—PAINTING, ETC.—For repairing and painting the Institute. Specification with Mr. Jacob Rees, architect, Pentre.

SEPTEMBER 25.—**Barnes.**—PAVING.—For paving with deal blocks. Plans and specification seen, and schedule from Mr. G. B. Tomes, A.M.Inst.C.E., Surveyor, Council House, High-street, Mortlake, S.W.

SEPTEMBER 26.—**Leeds.**—PAINTING.—For painting at Block A, Block B, and the Nurses' Home of the Union Infirmary. Specifications from Mr. James H. Ford, Clerk to the Guardians, Poor Law Offices, South-parade, Leeds.

SEPTEMBER 26.—**Nelson.**—PAINTING, ETC.—For painting and decorating at the Town Hall. Specification and sketch, on deposit of 10s., from the Borough Surveyor, Nelson.

ROADS, SANITARY AND WATER WORKS.

SEPTEMBER 18.—**Baildon.** — SEWER.—Construction of main sewer. Specifications and quantities, on deposit of 5s., from Mr. J. Myers, the Council's Surveyor, Council Offices, Baildon.

SEPTEMBER 18.—**Briton Ferry.**—GRANITE.—Supply of granite. Mr. H. Alex. Clarke, Engineer and Surveyor, Council Offices, Briton Ferry.

SEPTEMBER 18.—**Broadstairs.**—MATERIALS.—For supply of materials, etc. Mr. H. Hurd, C.E., Town Surveyor, Council Offices, Broadstairs.

SEPTEMBER 18.—**Dudley.**—SEWAGE.—For various sewage works. Drawings and specifications seen, and quantities, on deposit of 1*l.* 1s., from Mr. J. Gammage, Borough Surveyor, Town Hall, Dudley.

SEPTEMBER 18. — **Harrington.** — ROAD, ETC.—Widening portion of main road and erection of a wall. Plan and specification with the Surveyor, Mr. C. W. Eaglesfield, at Gordon-street, Workington.

SEPTEMBER 18. — **Whitefield.**—SETTS.—Supply of granite setts. Specification from Mr. C. T. Hage, Surveyor to the Council, Elms-street, Whitefield.

SEPTEMBER 19.—**Altrincham.**—DRAINAGE.—For surface-water drainage. Plans, specifications and quantities, on deposit of 1*l.* 1s., from Mr. H. E. Brown, Surveyor, Town Hall, Altrincham.

SEPTEMBER 19. — **Frinton-on-Sea.**—STREETS.—For private street works. Quantities, on deposit of 2*l.* 2s., from Mr. E. M. Bate, Surveyor to the Council, Council Offices, Frinton-on-Sea.

SEPTEMBER 19.—**London.**—GRANITE.—Supply of blue Guernsey and Aberdeen granite, to Edmonton Station. Particulars at the Council's Offices, Town Hall, Edmonton.

SEPTEMBER 19. — **London.** — PIPES.—For the supply and delivery at Edmonton of stoneware pipes. Forms of tender at the Council's Offices, Town Hall, Edmonton.

SEPTEMBER 21. — **Blackwood.** — ROADS.—Construction of new roads. Plans and specifications seen, and quantities, on deposit of 1*l.* 1s., from Mr. A. F. Webb, M.S.A., Architect and Surveyor, Blackwood, Mon.

SEPTEMBER 21.—**Luton.**—STREETS.—For private street works. Plans and specification with the Borough Engineer, Town Hall, Luton.

SEPTEMBER 22.—**Loch Burn, Scotland.**—PIPES.—For laying and jointing cast-iron pipes from reservoir on the Loch Burn to the Glendyne Burn. Drawings with Messrs. Warren & Stuart, civil engineers, 94, Hope-street, Glasgow. Deposit of 1*l.* 1s.

SEPTEMBER 23.—**Staines.**—ROADS.—Construction of roads and footpaths. Plans, specifications and particulars from the architect, Mr. G. W. Manning, L.R.I.B.A., London-road, Ashford, Middlesex.

SEPTEMBER 23.—**Stanwell.**—ROADS.—Construction of roads and footpaths. Plans, specifications, and particulars from the Architect, Mr. G. W. Manning, L.R.I.B.A., London-road, Ashford, Middlesex.

* SEPTEMBER 23.—**Stanwell.**—ROADS, ETC.—The Staines Joint Hospital Committee invite tenders for construction of roads and footpaths at Stanwell, Middlesex. See advertisement in this issue for further particulars.

SEPTEMBER 25.—**Barnes.**—PAVING.—For paving carriageway. Plans and specification seen, and form of tender from Mr G. B. Tomes, A.M.Inst.C.E., Surveyor, Council House, High-street, Mortlake.

SEPTEMBER 26.—**Epsom.**—SEWER.—Construction of a 9-in. sewer, with manholes. Specification and plans by Mr. F. A. Pratley, Surveyor to the Council, R.D.C. Office, Waterloo-road, Epsom, Surrey.

* SEPTEMBER 26.—**Kilburn.**—WOOD PAVING.—The Willesden D.C. invite tenders for wood paving in Dyne-road. See advertisement in this issue for further particulars.

SEPTEMBER 27.—**Ashby.**—SEWER.—Construction of sewage disposal works. Plans, specification and quantities from Mr. F. C. Hett, Solicitor, Clerk to the Council, Brigg, Lincolnshire.

SEPTEMBER 28. — **Llandudno.** — SEWER.—Construction and extension of main sewer. Drawings seen, and specification, quantities, and form of tender from Mr. W. T. Ward, Deputy Engineer, Town Hall, Llandudno. Deposit of 10s. 6d.

SEPTEMBER 29. — **Blackburn.**—SETTS.—Granite setts. Mr. William Stubbs, A.M.Inst.C.E., Borough Engineer, Municipal Offices, Blackburn.

SEPTEMBER 29.—**Brighton.**—GRANITE.—Supply of broken granite. Specification and form of tender from the Borough Surveyor at the Town Hall, Brighton.

SEPTEMBER 29. — **Rogerstone.**—SEWAGE.—For providing and laying stoneware pipe sewers. Plans and specifications seen, and quantities, on deposit of 2*l.* 2s., from the Engineer, Mr. Gomer S. Morgan, Church-street-chambers, Pontypridd.

SEPTEMBER 30. — **Lymington.** — GRANITE.—Supply of granite and granite chippings. Mr. J. Barnes, Borough Surveyor, Lymington, Hants.

NOVEMBER 6. — **Barnet.** — SEWERAGE.—Construction of sewers, tanks, engine-house, pumps, wells, and other works at irrigation farm, Mays-lane. Specification and drawings seen, and quantities, on deposit of 3*l.* 3s., from Mr. William Fairley, M.Inst.C.E., Parliament-mansions, Victoria-street, Westminster.

No DATE.—**Inneleven.**—ROAD, ETC.—Formation of new road and stairway of Innerleven. Specifications and quantities from Mr. William D. Telfer, Burgh Surveyor, Buckhaven.

Public Appointment.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*INSTRUCTOR OF HANDICRAFT (WOODWORK)	London C.C.	100*l.* per annum	Sept. 23

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*CONTRACTOR'S STOCK AND PLANT, NORTHAMPTON—On the Premises	Woods & Co.	Sept. 18
*BUILDING MATERIALS, WALWORTH RD., S.E.—On the Premises	Veryard & Yates	Sept. 19
*30,000 PIECES OF WALLPAPER—at 3, Redcross-street, E.C.	Fryer, Cooper, & Co.	Sept. 20
*BUILDERS' STOCK, PLANT, AND MACHINERY, LAMBETH, S.E.—On the Premises	J. T. Skelding & Holland	Sept. 21
*BUILDER'S AND CONTRACTOR'S PLANT, SHRAPNELL BARRACKS—On the Premises	J. T. Skelding & Holland	Sept. 26
*PLANT AND MACHINERY, COUNTY HALL SITE, S.E.—On the Premises	H. J. Bromley	Sept. 28
*FREEHOLD SITES, SURBITON—At the Mart	Douglas Young & Co.	Oct. 4
*FREEHOLD BUILDING SITE, GT. ST. HELEN'S, E.C.—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	Oct. 18

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

September 1.—By E. S. Beard & Daniell.

Birdbrook, Essex.—Plough Inn, f. £1,570

September 5.—By F. Warman.

Canonbury.—16, Marquess-rd., u.t. 34 yrs., g.r. 16l., e.r. 60l. 265

Finsbury Park.—42, King's-rd., u.t. 64 yrs., g.r. 2l., e.r. 40l. 250

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; h.h. for beerhouse; p.h. for public-house; o. for others; s. for shops; ct. for court.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and not to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the average prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£	s.	d.
Best Stocks	1	13	0
Picked Stocks for Facings	2	7	0

Per 1000, Delivered at Railway Depôt.

	£	s.	d.		£	s.	d.
Flettons	1	9	0	Double Headers	13	7	6
Best Fareham Red	3	12	0	One Side and two Ends	17	7	6
Best Red Pressed Ruabon Facing	5	0	0	Two Sides and one End	18	7	6
Best Blue Pressed Staffordshire	3	15	0	Splays & Squints	15	17	6
Do. Bullnose	4	0	0	Best Dipped Salt Glaz'd Str'tch'rs	10	17	6
Best Stourbridge Fire Bricks	3	14	0	Headers	10	7	6
GLAZED BRICKS.				Quoins, Bullnose, and Flats	14	7	6
Best White and Ivory Glazed Stretchers	10	17	6	D'ble Stretchers	16	7	6
Headers	10	7	6	Double Headers	13	7	6
Quoins, Bullnose, and Flats	14	7	6	One Side and two Ends	17	7	6
D'ble Stretchers	16	7	6	Two Sides and one End	18	7	6
				Splays & Squints	15	17	6

Second Quality White and Dipped Salt Glazed, £1 5s. per 1000 less than best.

	s.	d.	
Thames and Pit Sand	6	9	per yard, delivered.
Thames Ballast	5	3	" "
Best Portland Cement	20	0	per ton, "
Best Ground Blue Lias Lime	19	0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	12s. 6d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.	

STONE.

Per Ft. Cube.

	s.	d.
BATH STONE—delivered on road waggons, Paddington Depôt	1	6½
Do. do. delivered on road waggons, Nine Elms Depôt	1	8½
PORTLAND STONE (20 ft. average)—		
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	1
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	2½

Per Ft. Cube, delivered at Railway Depôt.

	s.	d.		s.	d.
Ancaster in blocks	1	10	Closeburn Red Freestone	2	0
Beer in blocks	1	6	Red Mansfield Freestone	2	4
Greenshill in blocks	1	10	Takeley & Gweepyr Stone	2	8
Darley Dale in blocks	2	4			
Red Corsehill in blocks	£2	3			

STONE (*Continued*).

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.

	s.	d.
Scappled random blocks	2	10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	3
6 in. rubbed two sides ditto, ditto	2	6
3 in. sawn two sides slabs (random sizes)	0	11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7
1¼ in. to 2 in. ditto, ditto	0	6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3	0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2	8
6 in. rubbed two sides ditto	3	0
3 in. sawn two sides slabs (random sizes)	1	2
2 in. self-faced random flags	0	5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£	s.	d.	In. In.	£	s.	d.
20×10 best blue Bangor	13	2	6	20×10 best Eur'ka unfading green	15	17	6
20×12 ditto	13	17	6	20×12 ditto	18	7	6
20×10 1st quality ditto	12	0	0	18×10 ditto	13	5	0
20×12 ditto	13	15	0	16×8 ditto	10	5	0
16×8 ditto	7	5	0	20×10 permanent green	11	12	6
22×10 best blue Portmadoc	12	12	6	18×10 ditto	9	12	6
16×8 ditto	6	12	6	16×8 ditto	6	12	6

TILES.

At Railway Depôt.

	s.	d.		s.	d.
Best plain red roofing (per 1000)	42	0	Do. Ornamental (per 1000)	52	6
Hip and Valley (per doz.)	3	7	Hip and Valley (per doz.)	4	0
Best Broseley (per 1000)	50	0	Best Ruabon red, brown, or brindled (Edw'da) (per 1000)	57	6
Do. Ornamental (per 1000)	60	0	Do. Ornamental (per 1000)	50	0
Hip (per doz.)	4	0	Hip (per doz.)	4	0
Valley (per doz.)	3	0	Valley (per doz.)	3	6
Best "Hartshill" brand, plain sand-faced (per 1000)	50	0	Staffords. (Hanley) Reds or Brindled (per 1000)	42	6
Do. pressed (per 1000)	47	6	Hand-made sand-faced (per 1000)	45	0
			Hip (per doz.)	4	0
			Valley (per doz.)	3	6

WOOD.

BUILDING WOOD.	At per standard. £	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14	0	0	...	15	10	0
Deals: best 3 by 9	13	10	0	...	14	10	0
Battens: best 2½ in. by 7 in. and 3in., and 3 in. by 7 in. and 8 in.	11	10	0	...	12	10	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	...	7 in. and 8 in. less than		
Deals: seconds	1	0	0	less than best.			
Battens: seconds	0	10	0	"		"	
2 in. by in. and 2 in. by 6 in.	9	10	0	...	10	10	0
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	...	10	0	0
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.			
¾ in.	1	0	0	"			
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5	0	0	...	5	10	0
Seconds	4	10	0	...	5	0	0
Small timber (8 in. to 10 in.)	3	17	6	...	4	0	0
Small timber (6 in. to 8 in.)	3	5	0	...	3	10	0
Swedish balks	2	12	6	...	3	0	0
Pitch-pine timber (50 ft. average)	4	10	0	...	5	5	0

JOINERS' WOOD.	At per standard. £	s.	d.		£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	24	10	0	...	25	10	0
3 in. by 9 in.	22	10	0	...	23	10	0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	...	18	0	0
Second yellow deals, 3in. by 11in.	19	0	0	...	20	0	0
" " 3 in. by 9 in.	18	0	0	...	19	10	0
Battens, 2½ in. and 3in. by 7 in.	14	0	0	...	15	0	0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	...	12	10	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	...	22	10	0
Do. 3 in. by 9 in.	18	10	0	...	19	10	0
Battens	14	0	0	...	15	0	0
Second yellow deals, 3 in. by 11 in	16	10	0	...	17	10	0
Do. 3 in. by 9 in.	15	0	0	...	16	0	0
Battens	11	10	0	...	12	10	0
Third yellow deals, 3in. by 11 in.	13	10	0	...	14	10	0
Do. 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	15	0	0	...	16	0	0
" " 3 in. by 9 in.	14	0	0	...	14	10	0
Battens	11	10	0	...	12	10	0
Second white deals, 3in. by 11in.	14	0	0	...	15	0	0
" " 3 in. by 9 in.	13	0	0	...	14	0	0
Battens	10	10	0	...	11	0	0
Pitch-pine: deals	19	0	0	...	21	0	0
Under 2 in. thick extra	0	10	0	...	1	0	0
Yellow Pine—First, regular sizes	44	0	0	upwards.			
Oddments	32	0	0	"			
Seconds, regular sizes	33	0	0	"			
Oddments	28	0	0	"			
Kurai Pine—Planks, per ft. cube.	0	3	6	...	0	5	0
Danzig and Stettin Oak Logs— Large, per ft. cube	0	3	0	...	0	3	9
Small " "	0	2	6	...	0	2	6
Wainscot Oak Logs, per ft. cube	0	5	6	...	0	6	0
Dry Wainscot Oak, per ft. sup. as inch	0	0	8½	...	0	0	9½
¼ in. do. do.	0	0	7	...		—	
Dry Mahogany—Houndras, Tobasco, per ft. super. as inch	0	0	10	...	0	1	1
Selected, Figury, per ft. super. as inch	0	1	6	...	0	2	6

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	At per standard. £	s.	d.		£	s.	d.
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1	6
Teak, per load	18	0	0	...	22	0	0
American Whitewood planks, per ft. cube	0	4	0	...	0	5	0
Prepared Flooring, etc.—	Per squares.						
1 in. by 7 in. yellow, planed and shot	0	13	6	...	0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13	6
1 in. by 7 in. " "	0	14	0	...	0	15	6
¾ in. by 7 in. white " "	0	10	0	...	0	11	0
1 in. by 7 in. " "	0	13	9	...	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £	s.	d.		£	s.	d.
Rolled Steel Joists, ordinary sections	7	0	0	...	7	10	0
Compound Girders, ordinary sections	9	0	0	...	10	0	0
Steel Compound Stanchions	11	0	0	...	12	0	0
Angles, Tees, and Channels, ordinary sections	9	0	0	...	10	0	0
Flitch Plates	9	0	0	...	9	10	0
Cast Iron Columns & Stanchions, including ordinary patterns	7	10	0	...	8	10	0

METALS.

	Per ton, in London. £	s.	d.		£	s.	d.
IRON— Common Bars	8	10	0	...	9	0	0
Staffordshire Crown Bars, good merchant quality	8	15	0	...	9	5	0
Staffordshire "Marked Bars"	10	10	0	...	—		
Mild Steel Bars	8	15	0	...	9	5	0
Hoop Iron, basis price	9	5	0	...	9	10	0
" " Galvanised	17	0	0	...	—		

("And upwards, according to size and gauge.)

Sheet Iron Black— Ordinary sizes to 20 g.	9	15	0	...	—		
" " 24 g.	10	15	0	...	—		
" " 26 g.	12	5	0	...	—		
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	0	0	...	—		
Ordinary sizes to 22 g. and 24 g.	15	10	0	...	—		
" " 26 g.	16	10	0	...	—		
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18	0	0	...	—		
" " 22 g. and 24 g.	18	10	0	...	—		
" " 26 g.	20	0	0	...	—		
Galvanised Corrugated Sheets— Ordinary sizes, 6ft. to 8ft. 20 g.	14	10	0	...	—		
" " 22 g. and 24 g.	14	15	0	...	—		
" " 26 g.	16	5	0	...	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	0	0	...	—		
Best Soft Steel Sheets, 2 g. & 24 g.	13	0	0	...	—		
" " " 26 g.	15	0	0	...	—		
Cut Nails, 3 in. to 6 in.	10	10	0	...	11	0	0

(Under 3 in., usual trade extras.)

LEAD, &c.

	£	s.	d.				
LEAD—Sheet, English, 4lb. and up	17	15	0	...	—		
Pipe in coils	18	5	0	...	—		
Soil pipe	21	5	0	...	—		
Compo pipe	21	5	0	...	—		
ZINC—Sheet—	In casks of 10 cwt.						
Vielle Montagne	34	10	0	...	—		
Silesian	33	15	0	...	—		

Zinc, in bundles, 1s. per cwt. extra.

COPPER— Strong Sheet per lb.	0	1	0	...	—		
Thin "	0	1	1	...	—		
Copper nails	0	0	10	...	—		
Copper wire	0	0	10	...	—		
BRASS— Strong Sheet	0	0	11	...	—		
Thin	0	1	0	...	—		
TIN—English Ingots	0	1	10	...	—		
SOLDER—Plumbers'	0	0	8½	...	—		
Tinmen's	0	0	11	...	—		
Blowpipe	0	1	2	...	—		

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
" fourths	1½d.	22 oz. thirds	3d.
21 oz. thirds	3d.	" fourths	4½d.
" fourths	2½d.	Fluted Sheet, 15 oz.	3½d.
26 oz. thirds	4d.	" 21 oz.	4½d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
¼ "	2½d.	Ditto, tinted	5d.
⅜ "	3½d.		

Not less than three crates.

OILS, &c.

	£	s.	d.
Raw Linseed Oil in pipes per gallon	0	3	9
" " in barrels "	0	3	10
" " in drums "	0	4	0
Boiled " in barrels "	0	4	0
" " in drums "	0	4	3
Turpentine in barrels "	0	3	3
" in drums "	0	3	5
Genuine Ground English White Lead, per ton	23	10	0
Red Lead, Dry "	21	0	0
Best Linseed Oil Putty per cwt.	0	11	0
Stockholm Tar per barrel	1	12	0

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 6
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 6
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 6
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 6
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 0
French and Brush Polish	0 10 6

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the prepaid rate of 18s. per annum, with delivery *by Friday Morning's Post* in London and its suburbs.

To Canada, post-free, 21s. 6d. per annum; and to all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 26s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," 4, Catherine-street, W.C.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 a.m. on *Thursday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

BARNELEY.—For erection of a small church and school-room, etc., at Hoyland Nether. Mr. Wm. Allen, architect, Market-street, Hoyland:—

E., M., & Bricklayer: J. Parr, Hoyland, Nr. Barnsley* £650 0
C. & Joiner: S. Moll, Hoyland, Nr. Barnsley* 334 0
Plasterer: J. McPartlain, Hoyland, Nr. Barnsley* 54 0
Slater: G. H. Cooper, Wentworth, Nr. Rotherham* 85 0
P. G. & Painter: C. Firth & Sons, Hoyland, Nr. Barnsley* 160 0
Heating: Newton, Chambers, & Co., Thorncliffe Ironworks, Nr. Sheffield* 54 16

BIRMINGHAM.—For additions to premises, Livery-street and Edmund-street, Birmingham, for Messrs. Hudson & Son. Messrs. Ingall, Bridgwater, & Porter, L.R.I.B.A., architects and surveyors, 3, Temple-row-west, Birmingham:—

H. Lovatt, Ltd.	£1,505	T. Johnson	£1,290
W. Bishop	1,377	A. J. Teall & Son, Ltd.	1,243
J. Dallow & Sons	1,325	J. E. Harper*	1,198
W. Lee & Son	1,320		

CARLOW.—For erection of sixteen artisans' dwellings on two different sites, for the Urban District Council. Mr. Peter P. Carbery, Town Surveyor, Carlow. Quantities by Mr. James Mackey, 58, Dame-street, Dublin:—

E. W. Warren	£3,500	J. Murphy	£3,290
J. W. Mitchell	3,478	J. J. Dunphy	3,277
J. Dougan	3,437	T. & M. Richards	2,960
T. Thompson & Son	3,348	J. Walsh, Carlow*	2,846
M. O'Brien	3,321		

EARLESTOWN.—For erection of an isolation hospital. Mr. A. Bowes, surveyor, Town Hall, Earlestown:—

G. Finning, Earlestown* £3,700

LONDON.—For alterations and additions to Nos. 27 and 28, Pall Mall, for the Daimler Co., Ltd. Messrs. Briant & Son, surveyors, 200, Kennington Park-road, S.E.:—

W. Cubitt & Co. £920 0
White, Allom, & Co. 391 10
Lean, Thornton, & Co. 338 10
Patman & Fotheringham, Ltd. 528 0
J. Marsland & Sons, York-road, Walworth* 402 0

RICHMOND.—For erection of a receiving home at Parkshot, for Richmond Board of Guardians. Mr. Ed. J. Partridge, architect, Bank Chambers, Richmond. Quantities by Mr. T. J. Carless, surveyor, 39, Old Queen-street, Westminster:—

G. Smith & Sons	£2,739	Speechley & Smith, Richmond‡	£2,469
Goole & Son	2,700	Gibson & Co.	2,434
Jarman & Co.	2,489		

‡ Recommended for acceptance.

SHOREHAM-BY-SEA.—For construction of sewers, etc. Mr. A. W. Nye, surveyor, Town Hall, Shoreham:—

S. A. Holman	£1,071 2 3	Peerless, Dennis, & Co.	£824 0 0
W. Willett	1,037 9 4	Williams & Co., Carnarvon and Conway*	769 0 0
J. Parsons & Sons	937 0 0		
McKellar & Westerman	872 19 8		

THORNBURY.—For Thornbury Grammar School. Mr. R. S. Phillips, architect, Gloucester:—

Tucker Bros.	£868 0	W. W. Pitcher	£745 0
D. J. Tanner & Son	857 0	P. G. Hawkins, Thornbury*	699 10
W. T. Nicholls	834 10		
Orchard & Peer	795 0		

TOTNES.—For erection of buildings, bullock and sheep pens, in Totnes market. Mr. W. F. Tollit, Borough Surveyor, 10, High-street, Totnes:—

W. Reeves & Son, Totnes* £820

WALTHAMSTOW.—For alterations and additions at 30, St. James-street, Walthamstow, for Everett's Stores, Ltd. Mr. J. Williams Dunford, architect, 100c, Queen Victoria-street, E.C.:—

G. W. Barker	£192 10	F. J. Coxhead, Leytonstone*	£166 10
Fuller & Son	175 0		

WALTHAMSTOW.—For alterations and additions at 82, Hoe-street, Walthamstow, for Everett's Stores, Ltd. Mr. J. Williams Dunford, architect, 100c, Queen Victoria-street, E.C.:—

West Bros. & Pettit	£190	G. W. Barker, Walthamstow*	£163
Fuller & Son	182		
M. Congdon & Son	170		

OGILVIE & CO., Telephone: DALSTON 1268. Many years connected with the late firm of W. H. LASCELLES & CO., LTD., of Bunhill Row.

Amhurst Works, DALSTON LANE, N.E.

EXPERTS IN HIGH-CLASS JOINERY.

ALTERATIONS AND DECORATIONS. ESTIMATES FREE.

J. J. ETRIDGE, Jr. LTD.

SLATE MERCHANTS.

EXPERTS IN

SLATING, TILING.

BEST WORK ONLY.

Telephone 2665 Wall, or write

BETHNAL GREEN SLATE WORKS.

BETHNAL GREEN, LONDON, E.

Ham Hill Stone.
Doulting Stone.
Portland Stone.

The Ham Hill and Doulting Stone Co., Limited (incorporating the Ham Hill Stone Co. and C. Trask & Son, The Doulting Stone Co.).

Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

Grey Stone Lime,

GROUND LIME, WHITE CHALK LIME.

PORTLAND CEMENT,

PLASTER, SIRAPITE, AND SAND.

Delivered in truck loads to any Station, or by vans in London

ADDRESS: **JOSEPH S. PETERS.**

Works: MERSTHAM, SURREY. Tel.: Merstham 5.

Depôt: 417, OLD KENT ROAD. Tel.: Hop 3661.

WHAT!

USE WHITE

LIME-SAND BRICKS

(Of the Finest Quality)

FOR CONTRACT WORK?

WHY?

- The Bricks are uniform.
- Less mortar is required.
- Closer joints can be made.
- 15 per cent. more bricks can be laid per day.
- Where lights is required they need no whitewashing. Saving of material and labour.
- USED BY THE MILLION IN GERMANY, AMERICA, AND IN THIS COUNTRY.

These Bricks are made by the

GODSTONE BRICK & TILE CO. LTD., Oxted Road, Godstone, Surrey,

and can be delivered in quantities of not less than 5,000 within 10 miles of the Company's Works at 26/- per 1,000, net.

Send for Free Samples.

Asphalte.—The Seyssel and Metallic Lava Asphalte Company (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to the Forth Bridge Co.

SPRAGUE & CO., Ltd.,

LITHOGRAPHERS,

Employ a large and efficient Staff especially for Bills of Quantities, &c.

4 & 5, East Harding-st., Fetter-lane, E.C.

ASPHALTE

For Horizontal & Vertical Damp Courses.
For Flat Roofs, Basements, & other Floors.

The best materials and workmanship are supplied by

THE

French Asphalte Co.

Whose name and address should be inserted in all specifications.

For estimates, quotations, and all information apply at the Offices of the Company.

5, LAURENCE POUNTNEY HILL, CANNON STREET, E.C.

EWART'S

Cures in 19 cases out of 20.

"EMPRESS"

Write to-day for Illustrated Catalogue Free to

EWART & SON Ltd.,

346-350, Euston Road, London, N.W.

Established 1834.

Telephone: 2570 North.

SMOKE-CURE